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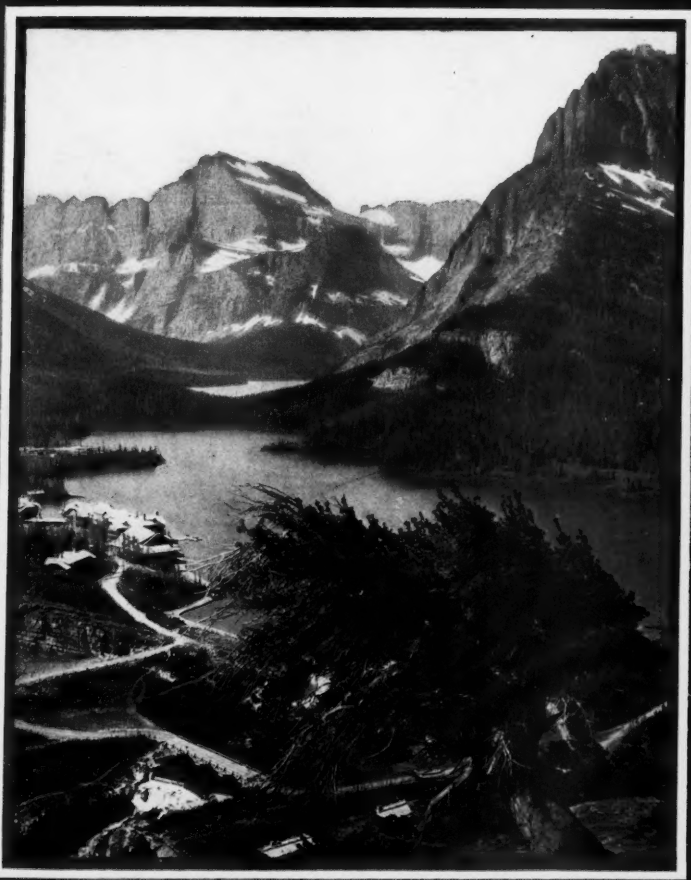

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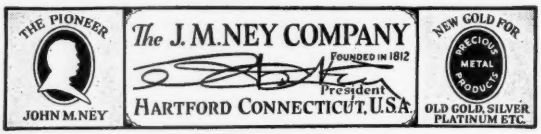

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THE
DENTAL DIGEST

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Reciprocity—A Plan

By L. W. Dunham, D.D.S., New York, N. Y.

First Article

The leading editorial in the September issue of The Journal of the American Dental Association, commenting on the Los Angeles Meeting, contained the following significant paragraph:

"The principle of reciprocity between the states received an impetus through the adoption of resolutions favoring this idea, and the appointment of a committee to study reciprocal relations and to cultivate a sentiment in favor of it."

It will hardly be necessary for the committee to "cultivate a sentiment in favor of it," at least among the rank and file of the profession, but there are a few State Board officials in states where reciprocity is not popular who will ask for a plan, and where the principal difficulty will be in meeting the educational standards now in force in those states.

Most fair-minded men in the profession would welcome free interchange of licenses between states if it could be brought about without lowering the standards set up in most of the states—in other words, if it did not entail "letting down the bars" to the unintelligent or ill-prepared practitioner. Not only must the present high standards be maintained, but a plan, to be acceptable, must place all dental graduates who wish to move from one state to another on an equal footing without working an injustice to those who have complied with the high school requirements as a preliminary to their professional education. In the light of present knowledge such a plan is not only possible but entirely practicable.

The plan is to use "Intelligence Examinations" whenever applicants for professional examinations are unable to present satisfactory credentials covering preliminary education.

As is well known, there is a large number of dental practitioners throughout the country who have never completed a course in an accredited high school. These dentists were graduated from dental colleges that did not enforce the requirements for preliminary education adopted by the National Board of Dental Faculties. As most State Boards of Dental Examiners insist upon all applicants submitting evidence that they have complied with the preliminary educational re-

quirements calling for a diploma from an accredited high school or academy, these practitioners are barred from taking the professional examinations, and consequently are unable to be registered and licensed to practise in states where the law is enforced.

To say that practising dentists who have never had the advantage of high school training should be barred from moving to states where such preliminary training is required does not dispose of the question. Many of these dentists undoubtedly rate as high in intelligence as average practitioners holding high school diplomas—they are quite as capable as dentists and are useful citizens.

For years, Education (with a capital "E") has been literally worshipped, and not entirely without reason, but the results of schooling have not always justified the high opinion its devotees hold for it. The reason lies in the fact that not all who seek an education are endowed with the same mental equipment, and much as we might desire to believe the contrary, no amount of schooling will improve the quality of the mental equipment or increase its capacity.

During the late war, a series of intelligence tests were employed by the United States Army, and approximately one million seven hundred thousand men ranging from 18 to 35 years were examined. The results were, on the whole, very satisfactory, in that the purpose of the tests was accomplished and out of the mass of statistics there came some extremely interesting facts that will undoubtedly exert considerable influence, directly or indirectly, on education in the future.

Professor Edward L. Thorndike of Columbia University, author of the Thorndike Intelligence Examination for High School Graduates, was asked by the writer if an intelligence test could be prepared which would determine the mental capacity of a dental graduate, and, if such were possible, if it would insure as high a standard of dental licentiates as are now admitted to professional examinations upon presentation of high-school or academy diplomas? Prof. Thorndike replied that, in his opinion, an intelligence test would be more reliable than customary evidences of preliminary education, and that men so examined and passed would be fully as competent, provided their technical skill and professional knowledge were such as to fit them for their special calling.

"In the words of the Army Report it has been thoroughly demonstrated that the intelligence ratings are useful in indicating a man's probable value to the service. For example, eighty-two per cent of the officers of the Army are found in the 'A' and 'B' Groups. In a unit about to go overseas three hundred and six men were designated by their commanding officers as unfit for overseas service. These were referred for psychological examination with the result that ninety per cent were found to be mentally ten years or lower.

"In other words, with this Army experience it is no longer possible

for anyone to deny the validity of mental tests, even in case of group testing; and when it comes to an individual examination by a trained psychologist it cannot be doubted that the mental level of the individual is determined with marvelous exactness."*

To bring certain facts to the attention of those who have not given the question any previous study, the writer wishes further to quote Henry Herbert Goddard in "Human Efficiency and Levels of Intelligence."

"Stated in its boldest form our thesis is that the chief determiner of human conduct is a unitary mental process which we call intelligence: that this process is conditioned by a nervous mechanism that is inborn: that the degree of efficiency to be attained by that nervous mechanism and the consequent grade of intelligence or mental level for each individual is determined by the kind of chromosomes that come together with the union of the germ cells: that it is but little affected by any later influence except such serious accidents as may destroy part of the mechanism.

"As a consequence, any attempt at social adjustment which fails to take into account the determining character of the intelligence and its unalterable grade in each individual, is illogical and inefficient.

"It is a matter of every-day observation, that children, as they grow, rise to a higher and higher level of intelligence. But two facts were unappreciated and even yet are so little recognized as to make the whole matter 'a theory' in the minds of most. These two facts are: First, that the intellectual development is *largely independent* of what we call learning or knowledge; and second, that not all develop to the highest level, or even near to it; many stop at some one of the lower levels of childhood.

"Why should we not ascertain the grade of intelligence necessary in every essential occupation, and then entrust to that work only those people who have the necessary intelligence? This would not be at all difficult to do. It would in some cases require considerable labor, but that is all. For example, how much intelligence does it require to be a motorman on a street car? To ascertain this, it is only necessary to give mental tests to all the motormen, and then ascertain from employers which ones are highly successful, which ones moderately successful and which prove to be failures. It would then be discovered that men of a certain mental level fail, men of another mental level are fairly successful, men of still a third mental level are highly successful and efficient. Now, of course, in each particular case certain other qualities enter besides the intelligence. For instance, a man may be highly intelligent, perfectly capable of being a motorman on a street car and yet he may be of such nervous, excitable temperament that he would

* "Human Efficiency and Levels of Intelligence."—Goddard.

get panicky at the first unusual situation. He would be ruled out not because of his intelligence but because of this other peculiarity."*

Since these facts are recognized by trained educators, why would not an intelligence test or examination serve to determine a man's intellectual fitness to practise dentistry in states where the educational standards were high?

What would be the result if all the states accepted the intelligence test in cases where the applicants for registration were not high-school graduates?

First, it would provide a basis for reciprocity without admitting low grade men into states having high educational standards. It would simply mean that all dentists who were not high school graduates, and who were unable to pass an intelligence examination would be compelled to remain where they were already licensed.

Second, it would insure to every dentist who could pass the intelligence test, the right to a fair examination before any Board of Dental Examiners in the country.

Third, it would go a long way toward eradicating sectionalism and thereby make for a more unified profession. Eventually it would make of every dentist, a real citizen of the United States, with full rights to "life, liberty and the pursuit of happiness," instead of limiting his full rights as a citizen to the confines of one state.

In time of war, dental surgeons from Georgia, Tennessee or Ohio were good enough to work on citizens (soldiers) from California and New York. *Then* they were *all* citizens of the United States. In time of peace they are told to "forget it."

The American Dental Association is on record in favor of reciprocity. The only hitch is in the varied educational standards.

It will require years to equalize the educational standards, and in the meantime there are thousands of intelligent men who are victims of injustice.

The intelligence test will bring out real fitness to practice in a way superior to any evidence of preliminary education, since that has frankly failed to eliminate the unfit.

Will the men who have this big question at heart give their thought to this suggestion and let us have their opinions?

* "Human Efficiency and Levels of Intelligence."—Goddard.

Are the Hygienists Making the Most of Their Opportunities?

By T. Andrew Buckley, D.D.S., New York

There seems to be a wealth of material in dental literature about the duties of assistants in dental offices, but not a great deal is written about the greater opportunities within reach of the Dental Hygienist. Just as in preventive medicine lies the greatest good in all medical practice, so too, in dental prophylaxis and education is to be found the greatest good in dental practice. The establishment of a dental clinic in a school, and the employment of competent persons to care for and educate the younger generation on the care of the mouth, comes nearest to the requirements in preventing future dental troubles. Every hygienic measure adopted strengthens the position of others that may be in practice, but in the whole field of hygiene there is no single part that can surpass the hygiene of the mouth in importance. Do the Hygienists realize their wonderful opportunities, and what is really expected of them? Do they take their great mission seriously enough?

The Hygienist seems to be satisfied with the title and license, and to let it go at that. The course is finished, the permit granted, and let's forget about it—so, at least, a good many of them apparently think. Some of us dentists felt the same way immediately after graduation. As long as we had a framed diploma and a license we forgot the struggles and travail in hurdling the various obstacles which at the time seemed places to trip us up. But after being thoroughly initiated and duly passed upon, we generally woke up sooner or later to the knowledge that the college course was just a beginning to teach one how to learn and adapt oneself to conditions. We also found out that if we have an excuse for being a part and parcel of this busy world, we must render the fullest service of which we are capable, and impart our knowledge to our fellow men.

There seems to be a prevailing tendency on the part of the Hygienist, after graduating from a course of excellent fitness for particular work, to let down on, or at least not to make the best of her splendid opportunities. It may be that she has not the incentive in private practice, or it may be that her greatest good could be done in a public capacity; it may be due to the fact that her opportunities for doing good are not sufficiently impressed upon or taught her at school. The dentist may be jealous of his superior position, and look askance at her independent efforts. Then again, she may have her attention centered on a different occupation. Be that as it may she seems to be falling short of her anticipated goal. She should have as much, and probably more time to educate the public than the busy dentist. She should strive to learn

what is expected of her, and to seize every occasion to acquire and impart information to those it may help.

Although some dentists are still jealous of their higher standing, certain other far-seeing men have recognized the necessity of added help in caring for the big dental problems presented today, and they have succeeded in anticipating future action of some kind by the public itself. It is much better to have the dental profession see what is necessary, and inaugurate changes, than it is to have measures forced upon them. We do not wish for any legislation, such as the present British government has enacted, to take care of their dental problems.

The dental profession has given willingly of its time and efforts to help the Hygienist, and she must reciprocate to the best of her ability. Doctors Stevenson, Fones, Van Woert, Waugh, Hughes, Burkhart and numerous other dentists have encouraged and assisted the Hygienist, and the more their services are appreciated the more amply repaid are they. The dentists themselves are grateful if the Hygienist gives her unstinted time to assist him in his various duties. We see numerous lectures given by dentists for the benefit of the Hygienists, and they do not seem to take advantage of these sincere efforts as they should.

In most offices the overhead expense is so great that a dentist must choose between a Hygienist and an assistant. A Hygienist would be his choice invariably if she were willing to help him in his various problems, and do her share in educating patients in the care of the mouth, and general prevention as we know it today. In fact, she should devote all her spare time possible in studying phases of prevention. But as a rule, what do we find? The Hygienist will clean teeth, but if occasion arises, and other office duties are not fulfilled, will she not let them go unnoticed? If books are to be kept, records to be made, instruments polished and sterilized, and a hundred and one other things to be done, is the Hygienist always willing to pitch in and do what she can to save the dentist the impossible added expense of having another assistant? In other words, is she willing to be an office manager, or the fifth wheel of the dental vehicle? Is she willing to take the patient in hand and give her a health talk about herself or little Johnny? A year's training in assisting might make a splendid requirement before taking up the course in Oral Hygiene.

Another thing which should be deplored in the Hygienist, is the too free use of the dental engine. Most prophylactic work can be best done by hand polishing, with less injury to the surrounding tissues, and in a more thorough manner. I believe the Hygienist should rarely use an engine.

Do all Hygienists know, and constantly teach that Nature's method of preserving mouth cleanliness is best accomplished through the excessive mastication of hard resistant foods? Does she teach the two artificial methods of cleansing the teeth are with tooth brush and dental

floss, to which may be added, the cotton roll? Does she teach that complete and effective prophylaxis, under existing conditions, also requires the thorough polishing of all tooth surfaces by a dentist or Hygienist at regular intervals? She should take the van in our main line of defence, and do yeoman work in the educational field. Does she know that the general condition of the school children of this country, relative to mouth hygiene, is appalling, if not disgraceful? Only 5% have clean and healthy mouths; scarcely 10% use a tooth brush. The children in the first five grades in our public schools average six good-sized cavities.

I know from a good many of my acquaintances that they dislike treating children, especially after practicing for several years. I know I do myself, and although fond of children, I have not the patience to work for them that I once had, and I hoped that women, with their greater patience and understanding, would take over a great amount of this work, and at least train the child in the proper care of the mouth.

It must be admitted that the Hygienist movement is still in its infancy, but the Hygienist must work to make herself better, and cooperate with her fellows to make a lusty child emerge into strong adolescence and robust maturity. If she does this, her future is assured, and the dentists and public will rise and call her blessed. And let me emphasize, it behooves us, as dentists, to do what we can to help them to greater usefulness.

33 West 42d Street.

Dentistry—Its Achievements and Possibilities

By M. A. Munblatt, D.D.S., Brooklyn, N. Y.

Much has been said and written of late on the development of dentistry, and at the same time a good deal of criticism has been handed out to our profession for the methods used by many in their practices, that it behooves us to give these subjects our earnest consideration. My previous article "Popular Dentistry," in the July issue of the DENTAL DIGEST, has touched lightly on the subject and the enthusiasm with which it has been accepted by my colleagues has induced me to explain more fully along this line. I will therefore attempt to do so, as the title of my article suggests, and I hope that my efforts will arouse the idealistic sense within us that we might diligently endeavor to come to a solution of the many problems confronting us.

Dentistry has developed rapidly, and within a period of no more than fifty years its growth and achievements are remarkable. From a

mere trade that was looked upon with little dignity by the more intellectual and average aristocratic individual, to a profession that is gradually attaining its place on a pedestal together with its closely related profession, medicine; from a calling that was a lucrative field for the charlatan, the quack and the inert, to a science that is increasingly attracting the most ambitious and active minds of our day—these are part of its development. It can readily be seen, therefore, that the great importance of our profession has occurred to many of us.

The connection between the condition of our teeth and the rest of the body is widely recognized today, and the interdependence of the two professions, dentistry and medicine, is admitted even by those who were prone not to do so previously. Dentistry is coming into its own, and it is, to my mind, going to help solve many of the medical problems of the present and future. The pioneers of our profession have accomplished much that is worthy; we of the younger generation must take up their tasks where they left them and with the worthy new material that is gradually entering our fields we are certain to solve many of our perplexing problems.

To appreciate the complicating developments within our profession let us consider the performance of certain of our operations or the construction of any piece of restorative work today. With the realization of the relationship between certain chronic conditions of the teeth and mouth and the diseases of the other parts of our body, surgical procedure has become so difficult today that a skill and medical knowledge equal to that of any general surgeon is paramount. The mere construction of a plate or a bridge requires, besides a knowledge of physiology and pathology, also a knowledge of mechanics and the sense of an artist for its proper structure. To properly replace a tooth requires today, besides an artistic sense, a radiographic study and knowledge of the surrounding tissues, a study of the occlusal plane and even a study of the general physiological condition of the patient. For the construction of a plate a study of the features and temperament of the patient and a study and knowledge of the muscle attachments of the dental arches are also necessary. In fact, any branch of dentistry, if practised scientifically, and that is the only way it should be practised, necessitates a broad knowledge of science both medical and otherwise, and a skill I venture to say not equalled by any other art or profession. In short, dentistry is practically the only profession that requires for its successful practice the skill of a surgeon, the heart of a physician, the artistic sense of an artist, the patience of a scientist and the genius of a mechanic; and right here I might add, to our great sorrow, it is the least appreciated and the most underpaid and neglected profession of our times.

When I compare the achievements of some of our scientists today

in the construction of a plate or bridge to perform the function and to look as natural as it does, with a beautiful painting or sculpture, I cannot help but realize the comparative lack of appreciation that the average individual has for the finished product. And surely I might add as much if not more skill or knowledge is necessary for the proper construction of any denture as is required for the completion of a painting or sculpture; and as to their comparative importance one is directly concerned with the health of the individual, while the other merely affects his sense of pleasure.

It is for this reason that I made a plea in my previous article for a greater knowledge of dental matters on the part of the public. It remains our duty to educate them to the possibilities and impossibilities of our profession, so that they might appreciate good dentistry, for as artists we crave appreciation of our resultant product for our efforts in its construction. At the same time I also meant the education of the philanthropist, the statesman and the government official to the need of dental institutions for research work, so lacking in our profession, as well as the education of the average medical practitioner to the necessity of greater cooperation between the two professions; and to give an instance of such lack of cooperation and its disastrous results, I will simply narrate a little incident of my own recent experience.

A patient, a man about thirty-five years of age, presented himself at my office just previous to my closing hour with a marked swelling on the right side of his face, and at the same time suffering from an excruciating pain. On examination of his mouth I found an ill-fitting gold dummy bridge from upper right canine to upper right second molar, and a gold crown on upper right third molar that was very loose. From the condition of the swelling and the history of the case I immediately suspected a maxillary sinusitis. I might add that the patient previously picked at the gum around the bridge when experiencing pain, and getting no relief allowed a friendly physician to lance his gum in that area with the same result, until he finally presented himself at my office. I then explained to the patient, in a manner that he could understand, my diagnosis of the case, and I referred him to an oral surgeon for treatment. Before discharging the patient, however, I extracted the loose third molar without any anesthetic, hoping in this way to release some pus and afford the patient some relief.

The next day, on communicating with the oral surgeon, I was surprised to hear that the patient did not come for treatment and I dropped the matter for the time being. However, about two weeks later I was informed, to my surprise, that he had undergone two operations on his right eye, his condition still being very serious. My interest in the case was awakened, and on investigation I found that no attempt was made to remove the bridge, that only after the two operations on his eye was

an oral surgeon called in for consultation, and then to find that he was too late for any treatment of the maxillary sinus, that could easily have been operated on through the mouth after the removal of the bridge with its abutment teeth. The patient, after another week of suffering, died from a general septicemia.

Does not this case, one of many that may not be called to our attention, illustrate my point clearly? First, we had faulty bridgework, faulty dentistry, then the ignorance of the individual, the ignorance of the physician, and finally lack of cooperation between the two professions. Is it not astounding that such conditions should be permitted to exist in a modern hospital?

I will now conclude this article with a few general statements that may clarify my views on certain dental questions so frequently discussed today; I hope they will impress my professional colleagues enough to receive their earnest consideration. At the same time I will attempt to refute the worthy criticism of Dr. A. H. Stone on my recent article, "Popular Dentistry," in the DENTAL DIGEST.

1. Root canal work as well as other dental operations need, besides a developed "aseptic conscience," a good deal of skill and experience that only come from conscientious training; and the sooner the profession realizes that not only must we broaden the scope of instruction for the dental student, but also give him the means of obtaining post-graduate training to apply his theoretical knowledge under proper supervision, the better dentist will we produce.

2. Good dentistry is invaluable, even more so than a beautiful painting or sculpture, and the public must be educated to that fact. Any dental service, whether it be diagnostic, surgical, prophylactic or restorative, needs a proper cooperation and understanding on the part of the patient to become a success.

3. If by some miracle we were able to so influence every member of our profession that his resultant work would be as ideal as possible, we would still have to educate the public so that they might derive the benefit of our efforts. To tell a patient that he has a cyst, without fully explaining the possible consequences of the retention of the cyst, in a good many cases will be of no avail. To make the most beautiful movable-removable bridge, or any other form of dental restoration, without giving the patient an intelligent explanation of its principles and care is by far incomplete. It might not be necessary to tell the patient that he is suffering from an acute abscess and not pericementitis, or hyperemia of the pulp and not pulpitis, but it would be advisable to explain the fact that the pulp of the tooth is like any other tissue or organ of the body and goes through the same different stages of inflammation, its retention within the tooth depending on the extent of

that inflammation. At the same time it would be advisable to explain the importance of early care of the teeth.

4. Faulty dentistry and quackery are part of the most important problems of the public, whose cooperation is necessary for their solution. They are like a disease and must be treated as such.

5. So much am I convinced of the necessity of the education of the public that I can see the near future greatly concerned with the problem. I predict the addition to the curriculums of our elementary and intermediate schools and colleges of certain elementary subjects in dentistry and dental hygiene, such as simple anatomy, physiology and pathology of the tooth, the history of dentistry and its possibilities and impossibilities. There is no reason why these subjects cannot be taught as well as physics, chemistry, biology and the like.

6. The importance of a greater medical knowledge on the part of future dentists is clearly visible, and as to whether or not he should be made to obtain his medical degree before the completion of his course is not the vital question to my mind. His dental diploma should require as much of medical instruction as the physician, with emphasis and training in his specialty. Here again I call attention to the need of post-graduate training and study; and it is our duty as a community to provide the necessary facilities for such training.

900 Fourth Ave.

Systemic Pathology from Dental Causes

By William F. Dunlop, M.D., D.D.S., New York

Article No. 1

The information contained in this series of articles is of just the sort the "practical" dentist desires, a record of what was done and what resulted. For easy reading, each article is confined to a brief description of one case.—EDITOR.

It is indeed fortunate that science has demonstrated the influence that conditions in the mouth exert upon the general health. Time and time again have cases appeared where pain has been engendered in various parts of the body by pathological, or otherwise abnormal, conditions in the mouth, or by an irritated nerve center such as the fifth pair of nerves connected with the sympathetic nervous system.

During the extended period of my professional activity I have had occasion to treat quite a number of such cases. I shall give the outstanding details of two of these cases that eminently serve to emphasize the necessity of giving careful and minute attention to the oral cavity in the diagnosis, and in the cure, of certain pathological conditions of the body.

Case One

Some years ago one of my patients presented herself for her customary tri-monthly examination, and the usual prophylactic attention. Although I had learned through hearsay that she had been ailing for some time I was greatly surprised to see her hobble into the office on two crutches. She explained that for about six weeks the muscles of the sole of her foot were so constricted that the merest touch of heel or toe to the ground would cause a paroxysm of pain in her whole leg. Her medical adviser had been using hot fomentations on her foot, and at that time was applying electricity.

Inasmuch as this patient kept her teeth and mouth in a perfectly sanitary condition, neither she nor I thought of tracing her trouble to her mouth. Upon examining her teeth, however, I found the upper first left molar to be a little denser in appearance than the others, and the amalgam filling in the crown oxidizing. Although there was no decay I could force a sharp explorer between the filling and the tooth. Thinking that perhaps the nerve might be dying I drilled into the tooth. Upon reaching the pulp I found no blood and occasioned no pain upon contact. Passing a little hooked explorer into the pulp I came upon a good sized pulp stone. When I attempted to raise the pulp stone from its base I found that the stone had a tenacious hold upon the pulp. When a pulp stone induces nerve pathology, the characteristic symptom is a perfectly quiet paralysis of some portion of the body. I marveled that while there was great pain when I tried to extract the stone, pressure upon it occasioned neither pain nor discomfort.

I mixed a little white arsenic with carbolic acid, and placed some of the mixture on and around the stone. I next saturated a pledget of cotton with carbolic acid, placed it over the arsenic mixture, and then sealed the cavity with cotton and sandarac.

I told her what I had found, and arranged for another appointment. Before leaving the chair she remarked, "I wish my foot were cured as easily as you have done this work." I then handed her the crutches. To my great astonishment she stood on both feet without the slightest pain and walked without the support of her crutches. From that time on she never complained about her foot.

The same patient later on suffered from neuritis in her left shoulder. Profiting by my first experience with her I opened up the upper left lateral and had the pleasure of finding that the pain in her shoulder immediately ceased. Dental treatment routed the neuritis.

As this case was treated before the X-ray apparatus was common to the average practitioner outside of the larger cities, I did not secure any radiographs.

IF

(With more than usual apologies to R. K.)

By John H. Morse, Reno, Nevada

If you can keep your nerve when all about you
I'm placing instruments you hate to see;
If you can grip yourself when I'm about to
Bear down upon a nerve not tenderly;
If you can grin, and not bite when I'm grinding,
Or when you hear me snarl, don't try to speak—
Because my office girl I'm merely asking
To get another drill before next week.

If you can dream, but not of what I'm doing;
If you can think, and hold your thoughts in check;
If you can take a probe, or a clean scraping
And keep your luncheon down below your neck;
If you can bear to hear the bur's swift whirring,
As up and down a nerve I softly play,
And hold yourself without a muscle stirring,
And then come back again for more next day;

If you can let me grab the tooth that's aching;
Grasp tight the chair and never pitch or toss,
Nor cuss, nor faint, nor die, while I'm extracting,
And never groan a bit about your loss;
If you can force your jaw to open wider,
Your tongue to keep away when I'm at work,
And hold them there while I drill that incisor,
And never spoil my technique with a jerk;

If you keep still while I move each bicuspid
To places where I think they'd better be,
And tell you that you've been to stupid dentists
Whose work I'll rearrange for just my fee;
If you then pay the bill which I will send you
At once, nor murmur of an overcharge,
Yours is the world and everything that's in it,
Because you are the only one at large!

The Endocrines and Preventative Dentistry*

By Jacob Gutman, M.D., Brooklyn, N. Y.

(This account is neither official nor complete. It represents the impression made by the paper upon one in the audience.—EDITOR.)

At the outset the essayist announced that he would eliminate from his paper the questions of focal infection, oral hygiene, and other topics which one usually thinks of in connection with prophylaxis.

It is common knowledge that many people who are extremely fussy in the care of their teeth find such efforts wasted, for the teeth continue decaying in spite of everything. On the other hand there are those who are strangers to the tooth brush, and who observe no rules of oral hygiene, yet the teeth remain sound and secure.

This, the essayist explained, was due to an inherited constitution which is able to impress upon the dental organs certain characteristics regardless of environment.

The dominant traits which are transmitted to the offspring may be physical or mental, or may be in the nature of a tendency to disease. The physical inheritance may be seen in the shape of the ears, nose or teeth. The mental similarity may be evidenced through successive generations of feeblemindedness, musical genius, or remarkable memory. The heritage of blood disease, and tendency to tuberculosis and cancer is well known.

It is frequently seen that supernumerary or missing teeth are present or absent in succeeding generations. Defects in the enamel, peculiarly shaped teeth, and those of off-color are also inherited. We can understand these facts when we realize that the characteristics of the parents are sealed up, and the fate of the individual determined in the act of fertilization. The endocrines control the future of the teeth, and whether the teeth will be of any certain character or another, is destined by them at this early period. A proper functioning thyroid, pituitary, or other organ of internal secretion, is necessary for the proper development of the teeth of the offspring.

Prophylaxis for the benefit of the masticatory apparatus must therefore be begun during the first three or four months of pre-natal life. The condition of the mother must be supervised during pregnancy, not merely to watch the calcium content of the blood, but to see that the endocrines are functioning properly.

Even after the birth of the child, nutrition of the mother still plays an important part in the development of its teeth during the period of nursing. The phosphates of calcium must be present, to take part in the structure of the teeth. The mother must have proper nourishment, and her digestion and intestinal absorption should be carefully noted.

* Read before 1st Dist. Dental Society, N. Y.—Sept. Meeting.

The entire subject of endocrinology is in its infancy, and it is too early to state anything definitely on the question of its value. It is of great importance for the dental profession, however, for it may be possible some day to so favorably control the endocrines as to insure everybody sound teeth. Speed the day!

Congenital Cleft Palate

By Vethake E. Mitchell, D.D.S., New York City

In the department of "Lay Education" in Oral Hygiene, there appeared an article entitled "Cleft Palate." No doubt this article was written to enlighten the public on the advantage of early operations in this class of deformities. Much emphasis was placed on the operation, and very little on the final result, viz., improvement of speech.

Not all cases are operated upon in early infancy, nor are all operations successful. When these unfortunates arrive at the adolescent age, their only hope of improvement in speech is in a mechanical appliance.

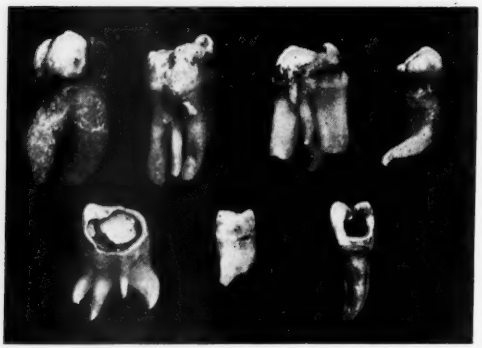
In the article referred to is found this statement: "The nature of the deformity makes the wearing of this plate (meaning an obturator or appliance) very unpleasant for the patient."

I take exception to this, as many patients have worn obturators or appliances for years with no discomfort whatever. I have several patients who came to me with perfectly comfortable obturators made by Dr. Kingsley, over thirty years ago.

Properly constructed appliances are not unpleasant for the patient to wear. Few men in the profession have devoted sufficient time and study to this subject to become able to construct such a restoration. While many have made an attempt, lacking knowledge and skill—which is only obtained by long practice—the result has been an appliance which is not only very unpleasant, but unsatisfactory in every way.

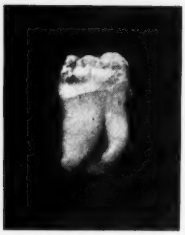
17 East 38th Street.

Dental Anomalies

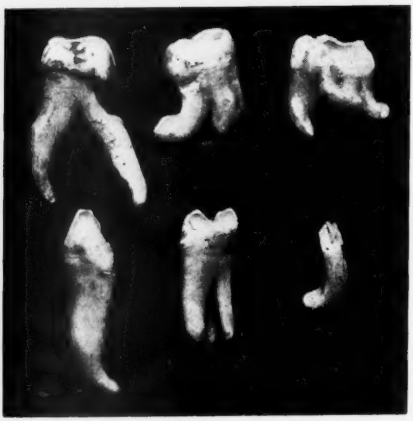


Dr. A. V. Welch, Penns Grove, N. J.

Dr. Jas. A. De Weese
Irwin, Pa.



Dr. F. E. Harper
Angola, N. Y.



Dr. F. E. Von Hoya, Detroit, Mich.

DENTAL LAWS

Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

ABYSSINIA

No dental laws, license or diploma required to practise dentistry in this country. In an absolute Monarchy permission to practise dentistry from the regnant authority is desirable if not absolutely necessary. We should not consider Abyssinia a profitable field for the dentist, according to American standards. The Empress Waizeru Zandita reigns in Abyssinia. The American Consul is subject to changes for obvious reasons. Ankober is the reputed capital.

AFGHANISTAN

No dental law reported. There are native and other dentists practising in the largest cities. Information in regard to dentistry is scanty and unreliable. Permission to practise dentistry in the largest cities should be obtained from the local authorities and the local taxes paid. Afghanistan does not hold out any substantial attraction to a foreign dentist, accustomed to the civilization of the Western Hemisphere. The Ameer is Amanullah Khan. Cabool is the reputed capital. The American Consul is subject to change.

ALABAMA

Board of Dental Examiners

Dr. W. J. Reynolds, President, Selma, Ala.
Dr. H. Clay Russell, Secretary-Treasurer, Tuscaloosa, Ala.
Dr. J. G. Hopping, Birmingham, Ala.
Dr. Geo. S. Hann, Gadsden, Ala.
Dr. E. H. Passmore, Dethan, Ala.

First Dental Law enacted 1891, and amendments and new Acts are dated as follows:

1843, 1848, 1852, 1865, 1866, 1867, 1876, 1881, 1887, 1896, 1901, 1907, 1911, 1915, 1919.

The English language, dental supervision, registration and examinations are required from all applicants for a license to practise dentistry in Alabama.

The meetings of the Board of Dental Examiners are held in Birmingham, at the Birmingham Dental College, Avenue P and 20th Street, beginning at nine o'clock, the first Monday after June 15th.

Fourteen earned, standard units of preliminary education required of applicants who have graduated subsequent to 1919.

No one is admitted to the examination who does not hold a diploma from a reputable dental school, and no intermediate examinations are given.

Applicants who have been out of school for more than five years may be granted one point on Theory for each elapsed year since graduation—provided grading on practical work averages not less than 80%.

Alabama has reciprocity with Tennessee, Kentucky, Illinois, Louisiana and Mississippi.

Theoretical examination will be on all branches usually taught in reputable schools. Do not write questions on your examination paper; write number of each question in Roman numerals in center of sheet just above your answer, which must be written with black ink in the same order as the questions appear.

All applications and credentials should be in the Secretary's hands at least two weeks before the examinations begin.

The fee for the examination ($20.00) twenty dollars, must accompany application, and in addition a certificate fee of ($5.00) five dollars will be charged for issuing certificates to successful applicants. Personal checks will not be accepted.

No fee will be returned to the applicant after he has filed his application and entered upon the examination.

An applicant failing at the first examination may be reexamined at "the next regular meeting of the board," without an additional fee, provided he notifies the Secretary by letter, at least one week before examination.

Applicants will be assigned chairs by their numbers and shall use same chairs throughout the theoretical examination, unless changed by the examiner in charge.

Applicant must be at least twenty-one years of age and of good moral character.

A recent well-finished, *unmounted* photograph with proper indorsements must accompany application and credentials. Postcard or kodak photo not acceptable, and the certificate must be written, not pasted, directly on the back of the photograph.

Send your preliminary education certificate with application, and bring your dental diploma with you to Birmingham.

Practical examination will consist of one gold, one amalgam, and one silicate filling in the operatory. A fixed, upper, sanitary bridge will be substituted for inlay in the practical examination, to consist of three-quarter or hood-crown on cuspid, and three-quarter crown on first molar, with sanitary pontics or dummies to be waxed up in occlusion, but not soldered, and to be mounted on typodont or extracted teeth, properly set in plaster models mounted on an articulator. All

work including preparation of abutments to be done before the Board, except that if porcelain root tips are used on pontics or dummies they must be baked before coming to examination. In addition to waxing up full upper and lower dentures on anatomical articulator—three point contact—have your models mounted and teeth selected previous to entering upon the examination.

Applicants will be required to furnish all necessary instruments and material for this work, including patient. The Board will furnish operating chairs. No excuse will be accepted for failure to comply with these instructions.

Applicants will not be permitted to borrow or loan instruments or material during the progress of the practical examination, examinations, or to give or receive advice either here or in the theoretical examination. No spoiled sheets shall be torn out by the applicant, but left in place with the answer sheets and marked void or spoiled, nor shall any other paper be used in the examining room for any purpose whatsoever.

Each applicant will be furnished with an envelope containing a numbered card on which he will write his name, seal the envelope and return to the examiners, and use this number on every sheet of examination paper. In no case shall the applicant's name appear on the paper.

Read the questions very carefully and do not give any information in the answer not asked for.

Special.—Do not tear, soil or in any way mutilate your application blank, as it must be filed as an official document for future reference. Use large envelope in mailing.

The neatness and accuracy with which you comply with these requests assists the Board in determining your fitness to practise dentistry.

Verified September 16, 1922, by Dr. H. Clay Hassell, Secretary-Treasurer.

ALASKA

Law dated April 30, 1913. Examination, Registration, the English language and dental supervision are required. All applicants examined, fee $25.00. A degree from a recognized dental college, theoretical examinations and tests taught in standard dental colleges, also demonstrations in diagnosis and prognosis are required. Certificates must be registered with the Court Clerk of the Judicial Division in which the dentist resides, paying the usual fee; annual registration with the Board by July first, fee $4.00. Reciprocity based upon equality of standards maintained, fee $25.00. No agreements so far. Elmo H. Kaser, Secretary-Treasurer, Juneau, Alaska.

ALBANIA

No dental law. Independence achieved 1912. Legislation is in the formative stage. Medical supervision is exercised in the Balkan States. The country is wild and mountainous; the inhabitants famous for their valor and fierce defense of their national existence. No special inducements to practise there are held out to the dentist of foreign birth.

ALBERTA, CANADA

Dental Acts in 1906, 1912, 1919. English language, Senate of Alberta University supervisions. Examination fee of $50.00. Practical and theoretical examinations are held May and September, usually in Calgary. Dominion Dental Certificates registered. John W. Clay, 914-17 Herald Bldg., Calgary, Alta.

ALGERIA

Act of 1911. French Medico-dental colonial law. Language and supervision provided. French credentials are most acceptable, i.e., two years in dental laboratory and three years dental college course with degree. Diplomas from recognized dental colleges may be accepted; examinations may be required. Possibilities for dental practice in the largest cities are represented to be good. Registration with the Secretary of the Medical Faculty, Algiers, Algeria.

ALSACE

Part of France. French License Requirements.

ANHALT

Part of the German Republic. German dental laws, license requirements, fees, and full details summarized under Germany.

ARMENIA

No dental law. Unsettled conditions. Armenia is to be returned to Turkey, in which event Ottoman regulations, if any, will prevail. See Turkey for Ottoman Dental Laws. Dentists who are willing to do missionary work are needed in Armenia.

(All States, Nations, etc., to be printed alphabetically.)

DENTAL ECONOMICS

How to Succeed in the Small Town

By Fred E. Harper, D.D.S., Angola, N. Y.

Judging from some of the articles that I have read in dental journals, it would seem that one must be at least a ten thousand a year man in order to be a success as a dentist. No doubt this is true if you are talking about the city dentist, but I believe that an equally great success can be made in the country on a much smaller cash income. I would say that six thousand in the country was better than ten thousand in the city.

To succeed in the country it is necessary first to be able to deliver the goods. Everybody knows everybody, and if work is not satisfactory it soon becomes known; on the other hand, if the work stands up that too is soon generally known and each day brings new people to the office.

Let me state right here a few things which in my opinion will bring success to the country dentist and perhaps to the city dentist as well.

First, I would mention personal appearance, and under this I would advise a clean shave every morning, a hair cut every two or three weeks; don't get to looking seedy. In the summer dress in white, short-sleeved shirts, white trousers and white shoes; change often enough to be always clean. The cost is small and it brings big returns in more ways than one; it not only pays many times over in money but it increases self respect and the respect of others and makes it easy to get the right fee. If possible have two chairs; it will save lots of time and will prevent many a job from getting away and pays for itself in a very short time and keeps right on paying dividends.

Next in importance is the assistant. No dentist can afford to be without the help of an assistant; if she is what she should be, she too will pay dividends.

Keep the office clean and homelike; a little white paint now and then, some new rugs, fresh flowers on the table, with a few late periodicals.

Remember above all else, no one likes to be hurt, so learn to do conductive; and one more thing, learn to smile and save your money and there will be nothing to fear when old age begins to shorten the working hours.

Brother Bill's Letters

My Dear Nephew:

If your mental attitude toward the keeping of dental business records is anything such as mine was when I began practice, you are going through some interesting experiences. Only recently I came across the book in which I made my first entries. And I could not help laughing at the simple directness with which it got down to business. Right at the top of the first page I read "Henry Verhoff, occlusal amalgam filling, upper right first molar, $1." There was nothing else except the date and the information that Henry paid the dollar.

What was the matter with that entry? Nothing at all as a second or subsequent entry, but a good deal as a first entry.

I didn't find out for a long time what was the matter with that as an opening entry, and as the result of my ignorance I sustained losses which I could ill afford. At the end of the year I knew how much I had earned and how much I had spent, but I did not know, in any clear-cut manner, whether I was better or worse off financially than at the beginning of the year, because I had no way of assembling all the factors necessary to such knowledge.

A long time afterward I learned what I should have known about my opening entry, and I want to transmit the knowledge itself and a proper conception of its importance by a simple illustration.

It is not uncommon, after a walk, for one to say "How far did you walk?" In order to answer, you must decide upon some definite starting point, and calculate from there. It is the starting point I want to emphasize. Without that no computation at the end of the walk is

possible. The opening entry of any set of business records should provide a definite starting point from which you can tell at any future time whether the business is making or losing money. The form of that starting point is now well known in the accounting world and probably cannot be improved upon. It consists in finding out what you are worth when you commence business and what you are worth at stated times thereafter and comparing the amounts.

The data for the opening entry is accumulated by making a list of everything the business owns, even if it is only partly paid for, and everything owed to the business that is believed to be collectible; and another list of all the things the business owes, including indebtedness on things partly paid for. The smaller total from these lists is subtracted from the larger and the difference is said to be the Net Present Worth of the business. Only business items are included in these lists. The house, automobile and life insurance are personal, and I shall suggest something about another inventory for them. Sometimes the Net Present Worth shows the debts to be in excess of the assets. Well, it is better to know that and set about remedying it than deceive yourself into the belief that you are solvent and leave the widow and children to find out the insolvency when it is too late to remedy the condition. Even if the Net Present Worth is very small, you are on your way to improvement when you know what it is and are ready to find out why it isn't more.

The importance of the opening entry is seen whenever the books are closed. A proper closing of properly kept business records will give the net worth at the closing date. If it is not greater by a satisfactory amount than that shown by the opening entry, investigations as to the cause are in order. And that is the beginning of intelligent economic administration.

When I write that the importance of an exact statement of the net worth and of satisfactory increases in that worth as the years pass can hardly be overstated, please do not get confused or excited and write me that a man's worth consists in the nobility of his character and the value of his service rather than in the multitude of things he possesses, because I not only know that as well as you do but I believe it more firmly and I know something about the relation between possessions and achievement. Don't take offense at that, because the purpose of these letters is to help you to riches of character and achievement and not to the hoarding of money.

You only half believe what you write about worth consisting in character and service, at least as applied to yourself, because you have never taken the steps necessary to develop your service to its maximum. You are a very ordinary dentist because you cannot afford the time or money for study and postgraduate courses. You are kept more ordinary by your necessity for sticking at chair or bench as long as you

"This emancipation from the fear and worry of your old self will mark the beginning of your greatest growth."

can find someone to stick for. You have little time or strength for public activities, even in matters of community health. You are bothered about the family expenses now and inadequate provision for your own old age. You cannot even afford time to do what you'd like to do for your patients. And until you got Miss Manager you were doing about a dozen things which you can do only indifferently well and shouldn't do at all. In other words, in spite of all your fine expressions, you have persisted in the things that cramp your character and service, rather than seek the things that set both free to grow.

A knowledge of your net worth and a proper annual increase in its amount is of maximum importance in your life because it will release you from many uncertainties and worries, will show that you can afford to relegate minor duties, will harmonize working hours with the requirements of health and study, will set you joyfully on the way to mental and technical improvement, will clarify your vision to see opportunities you now miss, will enable you to give your patients the time and attention they deserve and emancipate your confidence in your profession and yourself as its servant. This emancipation from the fear and worry of your old self will mark the beginning of your greatest growth. If that isn't giving your soul its chance, as measured in terms of service and growth, I don't know what is.

A second thing I should have done at the time when I made that opening entry, but which I did not learn to do for 20 years, was to make an inventory of strictly personal possessions, aside from the practice, by setting down in one column everything I owned, and in another column everything I owed, and subtracting the smaller from the larger. It would have taken only a few minutes and a few lines then but it would have given me definite knowledge of progress or lack of progress that would have been of great value. When I did begin it, years later, I was able to give each item of possessions a full line on one page of a tiny note book and the net assets were very small. But the size of the assets is not the point. It is to know of what they consist and whether or not they increase properly from year to year. Both forms of annual inventory are mileposts on your road to a competency.

From the day that Mrs. Bill and I took the first personal inventory, we never forgot its teachings. And through the year many a question was settled in the light of its effect on the inventory at the end of the year. That helped in cases where self denial was necessary, because we knew we were getting the results in a more permanent and desirable form.

Whenever I think of opening a set of business records, I think of a good friend in the profession who desired to keep records like ours and asked us to help him get started. We told him what information was necessary for the opening entry. After 20 years of work he did not possess that information about his own practice, but promised to get it.

He graduated about the time I did, under the three-year college plan, and we estimated his college expenses at about $2,500. He then wanted to inventory his office equipment, some of it antiquated and all of it worn, at its cost to him many years before. After much discussion, he entered it at $1,500, which is probably twice what it was worth. And he still carries it at what I believe to be a false value. We gave these items into the care of the Property Account by entering the amounts in the circle column of that account. As he said, "We put the account in the hole that much."

When we listed the amount due from patients, he gave the sum as $3,200. Inquiry showed that some of the accounts were several years old and that nothing had been paid upon them in recent years. One or two of the patients were dead and others had moved to unknown addresses. Yet the dentist was carrying these on his books as good accounts. He had a childlike faith that some day all would be paid and he felt that they were part of the estate he would leave to his family.

I have always admired the efficiency of one patient in this group. At the last sitting, the dentist gave him a bill for the entire service. As he took the bill, the man said, "Oh, by the way, doctor, I find I have come away without my pocketbook or a cent of change. Could you let me have a little to avoid the necessity of going back home before I go on to the office?"

"How much do you need?" asked the dentist.

"Oh, just a little. I see this bill is for $92. Let me have $8 and I can send you a check for an even hundred."

The dentist lent him the $8 and is still waiting for the check. I think no other deduction hurt his feelings quite so much as the $8. He didn't seem to mind the $92 for service, but this was real money, that he could see and feel. As nothing has been seen or heard of the patient for more than three years, I insisted that he deduct it from his assets, turn it over to an energetic collector, and regard it as a new asset if he ever got any of it back.

We finally agreed on $680 as the amount due from patients, probably collectible, though I felt that some of this was doubtful. We gave this into the charge of the Patients' Accounts by placing it in the circle column.

There was no question about the amount of cash on hand. This was entered with circle of the Cash Account. The amounts he owed two dental dealers were known and these were placed in the square of the Bills Payable Account.

We then had a total of $5,035 of assets and of $135 of liabilities. When we subtracted one from the other, there was a balance of $4,900 which was placed, as a balancing entry, in the circle column of the

Profit and Loss Account. This stood to his credit as the amount he was worth. His future entries would show him to be worth more or less, to be making a profit or a loss.

Owned		Owed	
Investment	$2500.	Due Dealer No. 1	$60.
Office inventory	1500.	" " No 2	75.
Due from patients	680.		135.
Cash on hand	355.		
	5035.		

When this entry was complete, he studied it for awhile and said, "I don't think much of your books."

"Why not?"

"They make me out to be worth $4,900, net, and I'm not worth it. I never have been worth it, and I don't know as I ever shall be worth it. I think the books lie."

The story which I was able to tell him then enlightened him a little as to a few fundamentals of business. I told him that so long as he was using the knowledge and skill acquired by his special dental training as the basis of the practice, it was a legitimate asset, but that it would pass with him through age, illness or death. It was not something that could be transferred or sold.

I showed him that at that time it was an intangible asset, real but not bankable and that it would remain such and finally become a loss unless he transformed it into money by making a definite charge against the practice each year on account of it, taking the money out of the practice and investing it in insurance or bonds. If he were a good enough business man, he could change it into a tangible asset. If he did not so change it, it was merely proof of business inability on his part and no fault of the accounting system. The same held good for the sum which he had originally invested in the equipment of the office. He finally admitted the justice of the contentions, made a charge of 5% per annum on the entire amount spent for dental education and equipment, entitled the charge "Refunding Investment," takes 1/12 of the total charge, or $17.00 out each month and is paying installments on an 20-year endowment policy which will almost give him his money back at the end of that time. If he had started to do this when he was younger, he would have had more than his investment returned to him.

Following the opening entry, we began on the next day's business just as I had begun for Henry Verhoff years ago. It seemed worth while to explain to him a few essentials of such entries from a legal

point of view, so that if he lent money to any more enterprising patients and desired to take the case to court, he might stand well.

The dentist's position in case of suit for the collection of a fee is always much stronger if the original entry for service is complete and clear. In the case of service for an adult, the entry should show when the work was done, for whom and of what it consisted, all recorded in a way to be intelligible to jurymen not especially trained in dental record making. The dentist's position will be much better if he can show either the itemized times for the visits or work or the total time required. And it will be still better if he can show to the court the usual cost to the office of that much time or that particular service, and support it with cost entries in his book, made in the regular course of business. This pretty nearly answers any claim by the defendant that the charge is excessive.

An interesting letter about this came to the office a while ago. It seems that a dentist in a western state had sued for the collection of an account, to which the defendant replied that the charge was excessive for the service and extortionate. When the dentist who sued was confronted in court with such a defense, he could only assert that the charge was customary in his practice, was not excessive and certainly not extortionate. As the account covered a long period of service and many items, his reply was not very effective. He got the case adjourned so that he could produce figures to support his statements.

One of his friends, a dentist in an adjoining state, had a practice of about the same annual gross receipts and kept his records in such way that he knew all his costs. The plaintiff paid him a visit, taking along his bill for services and made up itemized charges from his friend's books. The difference between the sum thus made up and his own charge was not great. His friend then appeared in court and demonstrated the methods of keeping time and costs and showed what such service as was being sued for would cost a practice such as the suing dentist enjoyed. A verdict was given for the plaintiff without the jury leaving its seats. It is said that the dentist who sued is now as good a bookkeeper as his friend.

Bill

Practical Office Accounting for Dentists

By Dr. P. H. Roberts, Rochester, New Hampshire

Having pursued a broad and general dental practice for a period of fifteen years, I am firmly impressed with the need of a simple accounting system for the general practitioner. I believe that a small percentage of dentists in general practice today have the training to conscientiously and faithfully pursue the bookkeeping systems proposed by some expert accountants and efficiency engineers. Furthermore, dentists who are looking for an efficient system of recording are usually very busy in their general practice. Their minds are engrossed in subjects far removed from the intricacies of expert accounting; and as a rule, they have little time during the day to devote to this matter. At the end of the day the dentist is usually fatigued, and is anxious to leave his office, after finishing his operative work, and any complex details of accounting are distasteful to him.

Of course, there are exceptions where this condition may not obtain; but I am speaking in a general way, and will explain in this article a system of bookkeeping which any dentist, regardless of his knowledge of accounting, may adopt without fear that he will have to call in an expert to audit his books occasionally. It is a system which his secretary can keep, and which consumes little, if any, of the dentist's personal attention. At the end of each day, week, month, and year it gives him a report showing in detail every factor in the conduct of his business, in which he should be interested.

DAILY TIME SHEET
May 22, 1922
OFFICE

		Enter	Left
	A. M.	8:00	11:55
	P. M.	1:45	5:50
Mrs. Jones		8:05	8:30
Vera Bickford		8:40	9:25
Katherine Hartley		9:40	10:55
Ext.	Mrs. Neay	11:00	11:20
Ext.	Mrs. Pender	11:25	11:50
Mrs. Burns		2:05	2:55
Florence Lewis		4:25	5:25

Total Hours in Office	8:00
Total Hours at Chair	5:00
Total Unproductive Hours	3:00
Total Amount Charged	$30.00

Fig. 1

A regulation stenographer's notebook is used, in which is kept a daily time sheet, as Fig. 1. At the end of the day it is possible to obtain the following facts:

Total hours in office per day.
Total hours at chair and laboratory per day.
Total hours unproductive per day.
Total amount charged per day.

Time spent at chair, and time spent personally on laboratory work are reckoned as productive time.

The card system is used. At the end of each day, on each patient's card, the work which has been done that day is itemized, and opposite this work is noted the amount of time as obtained from time sheet. Unless the patient pays cash, charges are seldom recorded. In other words, if the patient has a lot of work to be done, and doesn't intend to pay until completed, simply the work and time consumed are recorded, making all charges on completion of work. In this way you will understand that it is easier to determine what one is going to receive for one's time.

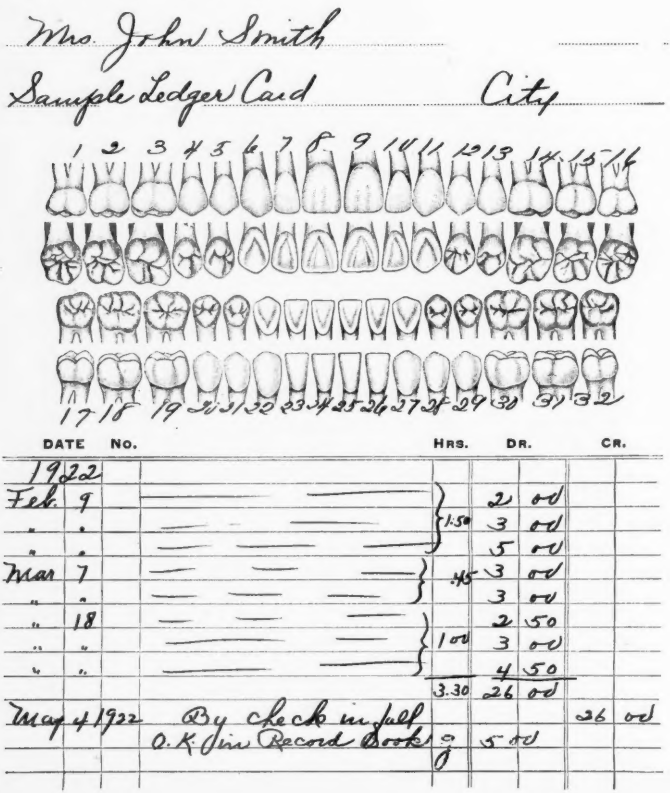


Fig. 2

To facilitate the keeping of records, a standard set charge per hour is used as a basis on which to reckon the daily total charge in record book (which is simply a daily summary of the figures as obtained from time sheet), obtaining this total in record book, by multiplying the number of hours spent personally at chair, and on laboratory work, by the set charge which, in the enclosed sample, is six dollars per hour.

At the end of each month one's secretary goes through the card file, and selects all cards of patients whose work has become finished, and accounts closed and paid during the month. As seen from the sample ledger card which is used, Fig. 2, you will observe that the charges showed a net gain of five dollars over and above what would have been the result at six dollars per hour, which latter sum is the one that has already been used in the record book. As five dollars more is charged

DAILY RECORD BOOK

	A	B	C	D
DATE	Hours in Office Per Day	Hours at Chair Per Day	Hours Unproductive Per Day	Amount Charged
May 23.....	8:00	5:00	3:00	$30.00
May 24.....	8:15	4:45	3:30	28.50
May 31.....	9:05	5:30	3:35	38.00
Total for Month.....	188:50	102:11	86:39	618.10
Average for Month..	8:12	4:26	3:46	26.87

Average number of hours in office found by dividing 188:50 by number of working days in month.
Average hours at chair found by dividing 102:11 by number of working days in month.
Average hours unproductive found by dividing 86:39 by number of working days in month.
Average amount charged found by dividing $618.10 by number of working days in month.

Fig. 3

than the secretary recorded against the patient in the record book, this much is gained, and is recorded in red ink on the ledger card. This gain is added to the total charge in the record book, as you will see on the date May 31, in daily record book, Fig. 3. In case that less than six dollars per hour is charged, it would be recorded on patient's card as a loss, and would be subtracted from the total charge in record book for that day.

Of course the secretary, instead of having one card to deal with at the end of the month, might have several; and she would balance up the net losses and net gains, over and above the standard rate as shown by these cards. The net balance is used, and, according as to whether it is a loss or gain, it is subtracted from, or added to, the total charge in record book for that day. One can see that in this way it averages up so that a pretty accurate picture of the charges is secured, at least

at the end of each month; and at the end of each year, a very accurate picture of the average charges per hour is obtained.

When a patient's work is completed, and no charges on the ledger card have ever been recorded, the total hours spent are added up, and multiplied by the standard rate to see what charges must be made to gain the end in view. This is then spread out over the work according to one's best judgment, and an itemized bill is sent to the patient.

A separate book, Fig. 4, is kept up to date once a month, and shows the total amount due on the account of every patient whose work has been completed, and account due for a period of thirty days or over. The totals of these accounts receivable are added up and recorded in a separate monthly record book, Fig. 5. For this purpose a record book 8 x 10 is suitable, using a double page which seems to be ample in width for all the columns as shown on Fig. 5. From this book one may procure a comparative monthly report under the following headings:

Average number hours in office per day; average number hours at chair and laboratory per day; average number hours unproductive per day; average charge per hour; average receipts per hour; bills receivable; bills payable; average amount charged per day; average amount received per day; amount received during month; personal expense for the month; office expense for the month; total savings (out of office receipts); total charge for month; total hours in office for month; total hours at chair and laboratory for month; total hours unproductive for month.

A separate book is kept for cash accounts, Fig. 6, from which is obtained the following facts at the end of each week, month, and year:

Total cash received; total personal expense; total office expense; total savings (out of office receipts). For this purpose a single entry system is used, as shown by Fig. 6.

On one of the front pages of the monthly record book a yearly summary is kept for the purpose of comparison. This is ruled exactly like the monthly record pages, with the exception that each horizontal line records a year's averages and totals, rather than a month's.

First, the greatest advantage which is seen in favor of this bookkeeping system is its absolute practicability for the average dentist. It is not expected that this would fill the requirements of some men who have already adopted a plan with which they are thoroughly satisfied. This method requires little or no time on the part of the operator, and only a few minutes a day for his secretary.

Second, it gives him, in a very clear, concise, and well tabulated form, information that every dentist should have regarding his practice; and this summarized report, at the end of each day, month, and year is ready for his inspection.

ACCOUNTS RECEIVABLE

	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1
Mrs. Page	$14.00	$9.00	$9.00	$9.00	$9.00	$9.00
Geo. Rickard	24.00	24.00	24.00	24.00	24.00	....
Total for April....				$633.00		
Ralph Lowe	....	....	....	....	16.00	....
Mrs. Farmer	....	....	....	....	15.00	....
Total for May 1.....					$564.00	
Vera Bickford	....	....	....	....	....	6.00
Francis Clarke	....	....	....	....	....	10.00
Total for June 1.....						$440.00

Fig. 4

MONTHLY RECORD BOOK

	Average No. Hours in Office	Average No. Hours at Chair	Average Unpro. Hours	Average Charge Per Hour	Average Receipts Per Hour	Bills Receivable	Bills Payable	Average Charge Per Day
Jan.								
Feb.								
Mar.								
Apr.								
May	8:12	4:26	3:46	$6.04	$5.08	$564.00	$142.00	$26.87
June								
July								
Aug.								
Sept.								
Oct.								
Nov.								
Dec.								
Total and Aver. *	8:15	4:28	3:47	$6.09	$6.29	$630.00	$115.60	$26.12

Average Receipts Per Day	Amount Received During Month	Personal Expense for Month	Office Expense for Month	Savings Bank for Month	Total Charge for Month	Total Hours in Office for Month	Total Hours at Chair for Month	Total Unpro. Hours for Month
$22.60	$520.00	$102.00	$104.50	$133.50	$618.10	188:50	102:11	86:39
$27.00	$6724.00	$2111.00	$1102.25	$2410.00	$6504.30	1933:48	1067:39	866:09

*Yearly Summary, recorded on one of the front pages of the Monthly Record Book.

Fig. 5

Third, it decreases waste, and increases production, because every minute that is wasted is automatically recorded; one's efforts are thereby stimulated to stop the leaks. Likewise, the records give one full credit for alertness, activity, and shrewd planning of one's time.

SINGLE ENTRY CASH ACCOUNT SYSTEM

June, 1921

June 26	Cash on hand	65.92	
" 27	Mrs. McDonald	3.00	
" 28	Edna Tarbell	50.00	
" 29	Gertrude Burns	21.00	
" "	Mrs. E. C. Bruce	1.00	
" "	Mrs. James Lucey, Jr.	8.00	
" 30	Mr. Ludger Cossette	20.00	
" "	Delia Crannan	2.00	
" "	Mrs. Twombly	5.00	
" "	Katherine Merserve	3.00	
" "	Roland Cossette	20.00	
		198.92	
	Weekly Balance		
June 26	Cash on hand	65.92	
	Cash received during week	133.00	
	Cash spent during week		119.83
	Cash on hand		79.09
		198.92	198.92
	Personal Expense	108.00	
	Office Expense	11.83	
	Savings Bank	.....	
		119.83	

June, 1921

June 26	P. H. R.	11.00	
" 27	Mrs. Glick	1.00	
" "	P. H. R.	1.00	
" 29	P. H. R.	22.00	
" 30	Dr. W. J. Roberts	5.00	
" "	P. H. R.	5.00	
" "	P. H. R.	1.00	
" 21	Fred Wiesner	68.00	
" 22	Robert Blair, P. M.	5.83	119.83
July 1	Balance	79.09	
		198.92	
	Monthly June Balance		
June 1	Cash on hand	30.54	
	Cash received during month	560.00	
	Cash spent during month		511.45
July 1	Cash on hand		79.09
		590.54	590.54
	Personal Expense	337.92	
	Office Expense	173.53	
	Savings Bank	.....	
		511.45	

Fig. 6

Fourth, it eliminates injustice to the patient and to the dentist, in that the patient receives the services of a man who has been stimulated to further interests in his business. It increases his speed and thoroughness. (Lack of thoroughness would a little later show up in unproductive time, through adjustments, etc.) The patient thereby receives greater value for his money spent, while the operator has the comforting assurance that he is neither taking advantage of his patient, nor cheating himself, but is receiving just compensation for his services.

"We learn wisdom from failure just as well as from success. We often discover what will do by finding out what will not do."

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.

NOTE—Mention of proprietary articles by name in the text pages of the DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the DENTAL DIGEST, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

Editor Practical Hints:

Oftentimes I read from some magazines the advantages of "Cast-Clasp Removable Bridge," but I never found any subject about the method of making it. For this reason I request you to send me some explanations about it, because in the college where I was graduated I cannot remember whether we were given any lecture in regard to the subject stated; neither can I find any dentist text-book here in the Philippines.

DR. GREGORIO DE VERA.

ANSWER.—There is nothing in book form that I know of on the subject of cast clasp removable bridge work. There have been a number of articles in magazines, however, and several men have been giving special courses at various places in the States for a number of years past. I would suggest that you write Doctor F. E. Roach, 59 E. Madison, Chicago, Illinois, requesting reprints of some of his articles. He has, I think, had more to say about the subject than any other one. I can, however, give you a brief outline in this letter of the procedure I follow:

The teeth that are to be used as attachments are ground a little to remove excess bulging and to provide approximately parallel sides for the fitting of clasps, with a depression at the marginal ridge of Bicuspids and Molars for an occlusal lug, which places the stress of mastication partially upon the tooth instead of wholly upon the gum. These ground surfaces of enamel are now highly polished and individual impressions made of the abutment tooth with Plaster Paris in a suitable split tray, preferably one with sides free to separate from the occlusal, instead of one with hinge which requires separating force to be applied toward the gingival and often results in marring the fine occlusal lines of the

impression. With a perfect impression thus secured, pour a smooth cast with any inlay casting investment that sets hard enough to hold its form satisfactorily. Mark the outline of clasps upon this model with indelible pencil, flow inlay wax upon it to required thickness, place a sprue, cut the model of the tooth down very small, invest and cast with formula E or F Cast Clasp Metal, fit the clasps upon the teeth in the mouth and take impression with a Split Side Tray. Make your dummies as for a fixed bridge; or for a partial plate with a narrow saddle fitting upon the gum. Solder the dummies to the cast clasps as you would to crowns or other abutments in a fixed bridge. It is important with this type of bridge to caution the patient and teach him to keep the bridge and attachments perfectly clean. Instruct him to leave cases out at night. This is to prevent decay of abutment teeth.

V. C. Smedley.

Editor Practical Hints:

I have been reading over your "Practical Hints" and have a case that I would like to help if I can.

I have a full upper and lower case that fits fine, and patient likes them alright, but he is an electrician and does house wiring. Now when he gets in a position that he has to drop his head below his body it gags him. And the holding of a cigar in his mouth also gags him.

Now this man is a peculiar character and naturally thinks I am at fault in this case, so would appreciate it if you can give me a helping hand.

F. F. T.

Answer.—I should examine the length of plate carefully to be satisfied that it does not extend back to the soft palate. If it does, shorten it and trace with modeling compound stick a narrow roll across the heel; soften and seat plate with firm pressure. Release pressure promptly, chill, remove and trim away excess. Let the man wear plate with this compound across heel and see whether gagging sensation will not be removed. Usually this gagging sensation with a plate is due to the failure of the plate to fit up snugly at the posterior border at the proper junction with the soft palate. If it fails to make contact with the palate at all times and in all positions of the mouth and body it seems often to result in the teasing or ticking of the nerve endings in the palate with a sensation of gagging.—V. C. Smedley.

Editor Practical Hints:

Will you kindly give me your opinion as to the best method of caring for hypodermic syringe?

McK. H. B.

ANSWER.—The following is the method used in our office: If the syringe is of metal, remove all detachable parts, place in sterilizer and boil for ten or fifteen minutes. Readjust parts and draw sterile water in and out three or four times. While not in use remove plunger from barrel and lay parts in a sterile cabinet.

If the syringe is of glass, remove plunger and needle and first rinse through warm water, then wrap parts in a piece of gauze and run cold water over them so change of temperature will not break or crack them. Put in sterilizer, bring to a gradual boil and let boil for from ten to fifteen minutes. Remove from sterilizer and reassemble parts. Draw sterile water in and out of syringe four or five times. Then remove needle and place in a small glass bottle placing remainder of the syringe in a small test tube. Platinum pointed needles are used and passed through gas flame until brought to a red heat just before making the injection. If syringe has not been used for any length of time, draw the sterile water in and out again before using.

Another method is given in Dr. Arthur E. Smith's "Block Anesthesia and Allied Subjects" but we use this believing it simpler yet thorough and effective.—V. C. SMEDLEY.

Editor Practical Hints:

Have had several cases with hard, bony lumps on the lower jaw lingual to the bicuspids; the one I have now the lumps are as large as my finger and about an inch long.

Would like to know what causes them, and should they be removed before making a denture? I have never heard anything said regarding such a condition. F. A. V.

ANSWER.—I cannot tell you the cause of the hard, bony lumps you refer to. They seem to be as indigenous to some lower mouths as the hard ridge in the median line in some other mouths is to the upper. They are composed of a hard, dense, bony structure and should be removed or allowed to remain just as you figure they may be a detriment or not a detriment in the fitting of a denture to the mouth. If the saddle of a denture can straddle them without infringing upon the tongue space and leave room for the teeth, I think they are of some advantage in providing a broader, bony base for support but in case they look as though they would interfere with plate fitting trim them down to desired contour.—V. C. SMEDLEY.

Editor Practical Hints:

Patient came to me complaining of soreness in right superior, first and second bicuspids, also in left superior, second bicuspids. Says they are sore and she can scarcely eat, especially hard foods.

This condition has persisted for two years, but not so bad. Right superior deciduous canine still in place. Right superior first and second bicuspids vital, with embedded canine. Left superior bicuspids vital. No large fillings. Left superior third molar sore on tapping with instrument; gums in healthy condition.

Kindly help me solve the reason for soreness, especially on left side and remedy for same.

O. J. B.

ANSWER.—I would suggest that you test these teeth carefully for traumatic occlusion. Have the patient close firmly and grind the teeth or move the lower jaw from side to side. Watch these teeth that are sore and see if there is not a lateral motion due to excessive pressure on some of the inclined planes. If you cannot detect motion with the eye, hold the finger against the buccal aspect of teeth and gums and have patient chew hard with lateral motion again. In a good many of these cases there is a lateral strain from occlusal stress causing this soreness. This should be removed by grinding, principally the buccal margin of the lower buccal cusps and the lingual margin or the upper lingual cusps. At any rate locate those surfaces that are giving the teeth a lateral kick and relieve same by grinding. It is usually, however, not desirable to grind the teeth sufficiently to relieve them of all occlusal contact, that is, unless there has been so much trauma as to cause inflammation and consequent lengthening of the teeth in the sockets.—V. C. SMEDLEY.

Editor Practical Hints:

Patient of mine has two lower posterior bridges which I placed there some three or four months ago and a partial upper. He now has two complaints—one is excessive flow of saliva so that it drips from his mouth while at work (mechanic in garage); the other is that anything sweet causes pain; heat and cold do not.

He seems to think the bridges cause the trouble; upon examination the abutments seem to fit and have no foul condition. He also complains of a metallic taste.

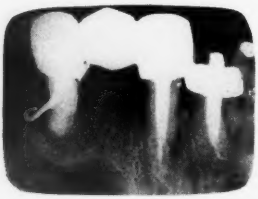
H. M. D.

ANSWER.—Undoubtedly the excessive flow of saliva is due to the stimulus from the same irritating factor as causes the metallic taste and the sensitiveness. A metallic taste in the mouth is usually caused by galvanic action, caused by the contact of two different metals, possibly bridge cusps with amalgam filling in the opposite jaw. The sensitiveness to sweet may be due to exposed cementum at the neck of the tooth above a crown, or enamel margin aggravated by the same galvanic stimulus.—V. C. SMEDLEY.

CORRESPONDENCE

Editor DENTAL DIGEST:

Herewith is an example of root canal filling and the tolerance of tissues that is entitled to some publicity, especially the "t. t." The patient, after being shown the picture, refused to have the tooth re-



moved, stating that it had given him good service and great comfort and he'd be "dingbusted" if any one was going to "pull it."

With great reverence for his fidelity to his dentist we agreed with him.

W. S. KYES, D.D.S.

Moscow, Russia, (By Mail)

Dental surgeons volunteering their services in the free dental clinics held daily at the American Relief Administration dispensary here, are melting gold rings, gold roubles and gold trinkets of every sort to obtain the necessary gold for crowns, fillings, etc. Poor and needy are bringing their last beloved small gold treasures to the dental clinics that the volunteer surgeons may obtain sufficient gold to repair bridge-work, construct crowns and replace lost fillings in teeth which have begun to ache.

"It is impossible for many to buy the dental gold," explained Dr. W. D. Nickelson, supervisor of medical work for the A. R. A., in the Moscow city district. "In fact it is impossible to get it here without a lot of trouble in locating it. As a result those who come to the free dental dispensary bring gold rings, golden crosses and even gold roubles. Gold roubles serve very well to provide the material needed."

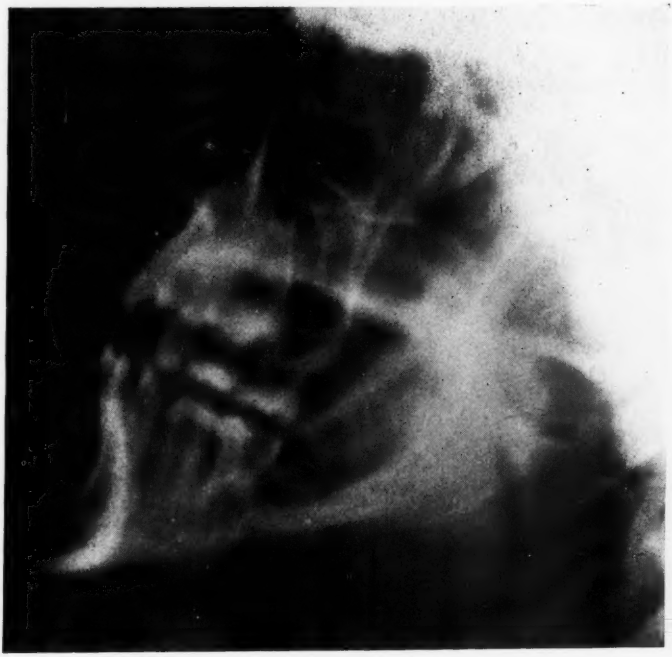
Dr. Nickelson said that inasmuch as few could afford to have fillings and bridge-work in Moscow now that the dental clinic was busily engaged in extracting teeth.

"They can't afford material for repairs so they have them yanked out," pointed out the young medical man, who is directing a dispensary which is serving hundreds of suffering in Moscow daily.

American Relief Administration.

Editor Dental Digest:

I am herewith enclosing to you an X-ray picture taken of an eleven year girl who has nothing but her baby teeth, and the X-ray shows that she hasn't any permanent teeth to come.



The girl seems normal in every respect with this exception. I examined her and her parents and I find them normal. She wasn't sick when she was small to cause this loss. Her front baby teeth are very small and sharp like mice teeth, and far apart.

I thought probably you would be interested in hearing about the case, and let your subscribers know of it by showing the X-ray in the DIGEST.

Personally, I have never heard of a case similar to it. I have seen cases where one to four permanent teeth would be missing, and in this

case they are all missing. I would like very much to hear from you in regard to this case, or from any of your readers.

If I can give you any more knowledge on this case I would be glad to do so. DR. D. T. CLARK.

Littlehampton, England.

Editor of DENTAL DIGEST:

In answer to "Please Help" in a recent number of the DIGEST will say, Umckaloabo and Chijitse, according to the statement of the proprietor, are the two principal ingredients in a certain "Consumption Cure," at one time widely advertised. Careful enquiry by the British Medical Association proved these substances to be non-existent. Erythrophylin Hydrocholrid is obtainable through any druggist.

T. L.

DENTAL SECRETARIES and ASSISTANTS

Methods of Conduct That I Have Found of Value in the Dentist's Office

By Ina M. Yates, Peoria, Illinois

The first consideration in the management of the dentist office is an efficient assistant; if she is all she should be, there will be no worry about results.

To be efficient she should do things, not dream about them or wonder if she can do them; she must apply theory to practice, she must make the past minister to the future, she must be alert, have presence of mind, be ready to adjust herself to the unexpected, be ready to sacrifice personal feeling to the will to win, not forgetting self-mastery, concentration, vision and common-sense.

The assistant means making or breaking your practice. The impression she makes on the patient means much, for many times he does not see the doctor until the hour of appointment. Culture and refinement shown in receiving a patient make a lasting impression.

To be represented in your office at all times, by yourself or assistant, creates an impression of permanency, system and thoughtfulness. The busy patient, calling while you are at lunch will appreciate the appearance of a neat office assistant far more than a lifeless room or a conundrum, such as "Back in a few minutes," or "will return at 2:00 p. m.," when it is already 2:30.

The duties of the assistant are many. She should open the office in the morning, put the finishing touches to the work of the janitor, see that every piece of furniture is clean and in its proper place for the day's work; see that the offices are ventilated and kept so throughout the day. Fresh air can be used extravagantly. Have the appointments listed so the busy doctor can see at a glance the work that is to be done.

The assistant should make all appointments, being sure of the name and address or other information the dentist may wish her to obtain. She also interviews prospective patients, and the impression made at these interviews means success or failure.

No doubt every girl who accepts the position of dental assistant

wishes to do her work well, but in nine cases out of ten she does not know how or where to begin. With the hospital training and nursing experience I had, I felt completely out of place in the dentist's office. It is a work in itself, which means a study in itself. No girl goes to school with the idea of being a dental assistant. She comes out of school seeking a position and her aims are high. Girls who accept such positions are usually without business training, and although willing to help, they are at a complete loss to know what to do. Many times the dentist is too busy to devote any time to instructing the girl he employs as an assistant. Probably he is indifferent to his profession; if so, he is indifferent to the welfare and success of his assistant. Or, probably he does not know how to tell her what to do. Perhaps she does not feel free to ask, so she is left to learn what she can by observation and experience.

A dentist related the following incident as an experience with his assistant. She had been in his employ but a short time. He was articulating a set of teeth when he was called to the phone, the message being such that the assistant could not take care of it. He forgot for the time what he had been doing, but when he returned to his work it had been completed. He said in part: "She was in a position where I could watch her. I wanted a girl who could and would use her hands as well as her brain, and I have her."

If the dentist expects his assistant to be what she should be or what he wants her to be, let him take time to train her. He had to be taught. The assistant should be ready to grasp and remember anything the dentist tells or shows her. And when the same condition arises in another case, she will recognize it at once and know just the method he would use and what he would need for that particular case. In other words, the assistant should be the silent business partner and be just as enthused over the increase of business, or over a pleased and satisfied patient as the dentist himself, knowing she had a part in bringing about the results.

The assistant should exclude all the bothers and worries incident to frequent interruption from the busy and conscientious operator. These have their influence upon one's skill and must be removed if the dentist is to put his whole heart and soul into his work. The dentist is employed to do the work of a dentist, and no patient is satisfied to pay for time that is devoted to other than professional service.

Unless a regular bookkeeper is employed, the assistant should take entire charge of the business end of the office, handling all money, writing all checks, and giving credit and receipts for money received. She should order all supplies, carefully checking statements before paying them. She should keep the books, make all records and post each daily; make statements at a given time, receive and dismiss all patients. A pleasant greeting counts for much, and if a patient has to wait for

his call, a friendly word or two, or perhaps a smile from the assistant will ease the tension and bring your patient into a much better attitude when called to the chair.

People like attention. Often when a patient is ready to leave he is more or less nervous and leaves without glasses, pocketbook, gloves or packages unless the assistant helps when he leaves. Then the rheumatic patient can't bend to put on his coat or rubbers, and he is grateful indeed for assistance.

The telephone is another important consideration. Here the assistant must use every precaution possible, for it is so easy to give the wrong impression over the phone. She should make her conversation pleasant, but bear in mind that she is talking business just as though she were in the reception room face to face with the patient. She must take into consideration the patient's exaggerated idea of the swollen jaw, hemorrhage and roots left following extraction; an assistant should not prescribe, but she is always safe in saying the doctor will be glad to make an examination and give you advice. Do not give prices over the phone; the patient has no conception of the work to be done. She should also bear in mind that the telephone is not a plaything. The dentist pays for it, and most of his business is transacted over it. The assistant's friends will soon "catch on" if they call a few times and she is busy, and the dentist will appreciate such thoughtfulness and interest in his business. It is well to remember that the business office is for business and not a reception room for friends.

The reception room is where the patient forms his first opinion; here we want sunshine, comfortable chairs and good literature. The walls, pictures and draperies should blend, giving a soft, pleasing effect on the already too nervous patient. So, if the reception room is clean, bright and attractive, he does not hesitate to go *one* more step. If he finds the business office topsy-turvy he begins to wonder about the operating room, so the desk and filing cabinets must be neat and tidy, everything must have its place and be in it; let the public know you are as particular about your business as your profession.

The operating room should be the best lighted, best ventilated and cleanest room of all. The floor should be one that is easily mopped, the walls bare, windows free from draperies and no unnecessary display of operative equipment.

In dealing with the things coming in direct contact with the patient, the instruments are first to consider. They must be polished and sterilized. The instrument tray and the hands that handle the instruments must be clean.

There is nothing more repulsive to a patient than a dirty cuspidor. The water should be kept running all the time. Not a trace of the previous operation should be seen by the following patient. That kind of advertisement does not appeal to the public.

A dental office is like a home—not complete without a woman's touch. The fact that the dentist may do good work has very little weight, for few patients realize the difference until long after the work has been done. But if he has an attractive office and competent assistant, his efforts will undoubtedly be well repaid.

As to appearance the assistant's apron should be white and clean. Cleanliness is a most particular item and carries more weight in the eyes of the public than any other requirement. Personal appearance denotes character becoming a dental assistant. A brisk step and attractive manner can be acquired if not natural. She must be wholesome and substantial and opposed to all "flippishness."

Conversation around the dentist office should be clean and free from all slangy expressions. Both dentist and assistant should be of few words. Keep all gossip out of the office.

Courtesy and cheerfulness are certainly assets in the dental office. An assistant may possess all the finer qualities, but if she has not the tact of courtesy, cheerfulness and goodwill—in other words, a sense of love and sympathy for all with whom she comes in contact—she is minus fifty per cent in efficiency.

Patience is one element of courtesy. Remember the patient is not in the chair because he wants to be, but because necessity demands it. The assistant must be quick of comprehension, also possess the ability to look ahead. Management means much in the dentist's office.

An assistant should be obedient, even if in her judgment she feels it is not the right thing. She should never let the patient know the doctor has made a mistake, and the doctor should show the same feeling toward the assistant. If a mistake has been made by either, correct it after the patient has gone.

Never argue or express surprise at what may happen; just as surely as you do, you have lost the confidence of the patient. In other words, have team-work in your office.

If the assistant is expected to pass confidence to the patient, she must first possess confidence in the dentist as a man, as well as his professional ability.

In talking to different assistants, I found that most trouble in the office comes from trying to take care of too many patients with one chair equipment. The girls say, "If the doctor had two chairs I could keep him busy, and we wouldn't lose time between appointments." It would do away with much unnecessary talking which each patient feels is essential to departure.

The dentist's office should not be run by the clock. Punctuality, both in arrival and departure to and from the office is a very good habit to form. The first duty of the dentist and assistant is to keep themselves fit. An hour's labor when you are up to the mark, bright, keen and enthusiastic is worth three hours' effort when you are tired. "Keep-

ing everlastingly at it brings success" is not true, but rather it brings poor results.

Rest and recreation are the best parts of labor. The higher the quality of your work the more necessary it is that you approach it only when you are at your best.

Use your personal influence. It is the greatest force that moves human beings. It is that force that goes out from you simply by virtue of what you are. It has nothing to do with what you do or say or try, except as these things express what you are.

Simply be right and then say whatever comes to your mind and do whatever comes to your hand and you can not fail to do the most possible toward helping along. Use your manners. They are the printed page on which people read of what you are inside.

Efficiency. Learn that word by heart. Get to saying it in your sleep. Do your work a little better than any one else can do it. Of all the joys on this earth, there is none so soul-satisfying and so one hundred per cent as "making good."

DENTAL LABORATORIES

Gold Crowns and Fixed Bridge Work

By Gene Mueller, Omaha, Nebraska

As a practical Laboratory man, I wish to give due credit to the men of a few years ago who went a far way to perfect crown and bridge work. Any man who has practised dentistry for the past seven or eight years has had direct evidence of fixed bridges which have stood the stress of usage for 20 to 25 years. This proves to my mind one thing, if no other, and that is the principle of construction was right.

It may not be amiss to go into the detail of this.

I have heard dentists say for years that a gold crown with the band running to the gum line has caused pyorrhea and recession of the mucosa. I disagree with this statement. In my own opinion, the trouble was brought on by faulty articulation, thus causing a "pinching" of the gum tissue at the gingival crevice. This statement is easily proven.

Often we find the root of the abutting tooth exposed far below the gold band, and the same condition exists where the three-quarter crown or the inlay is used as bridge abutments. Where the occlusal surfaces are cast, I do not believe sufficient care is taken in carving the wax, or of the gold itself, to see that at no time the bite is "locked." It is right here where the trouble starts and a lateral movement is likely to be caused. Where a healthy condition exists, the opposing articulating teeth wear off the high cusps and to a great extent relieve this condition, and this is the bridge or crown which gives twenty to twenty-five years of service.

Since the advent of the ready-made and seamless crown, this abused articulation shows by use.

My own belief is that the best and easiest way to make a perfectly articulated crown of gold is to reproduce the natural cusp of the tooth to be crowned. All excess bell of the tooth should be dressed down without grinding the natural cusp of the tooth itself, then get a good plaster impression, wax bite and wire measurement.

I would suggest running a Mellotte's metal tooth in the plaster impression. Trim about one millimeter at gingival margin, fit gold band

on metal die, which will give you as accurate fit of the band as is obtainable for a gold crown. Now solder a flat piece of gold for cusp to the band with 24-K liquid solder, which shows no seams. After swaging your cusp in a putty swager, you can reinforce crown without danger of opening up seams. You now have a crown which not only has relieved the patient of the agony of cutting the gum tissue by the pounding and removing of band, but a perfect fit, and reproduction of the articulation as nature intended it should be.

DIETETICS and HEALTH

Educating the Public

The following is the first of a series of "short stories" intended to inform the public of the possible results of dental ignorance or neglect, and to suggest the benefits which can be reasonably expected from intelligent dental treatment.

Any practitioner who wishes to have these stories published in his local newspaper is privileged to do so, but in all cases the author's name must accompany the article, and in no case must a local dentist be mentioned in any way in connection with the article. The design is to secure publicity for dentistry rather than for any individual practitioner.—EDITOR.

It Is Cheaper to Stay Well Than to Get Well

By L. W. Dunham, D.D.S., New York

John was methodical about most things and always wanted his affairs to go just so. If anything needed fixing, he had it fixed, but he always wanted a good job done because good work at a fair price was cheapest.

John had some trouble in one of his teeth, and went at once to a dentist who found a few others that needed attention and repaired them very well and to John's perfect satisfaction. It was a good job done and John said to himself, "Now my mouth's in good shape."

About three years after that John commenced to lose his grip. He was a sick man and knew it, but whenever anyone suggested that his teeth might be the cause, he replied very emphatically that his mouth was all right because he'd "had a good job done on his teeth" only three years ago, and the fillings were still there and he had no pain.

However, after going to the "Springs" and trying "treatments" and "cures" innumerable, he struck a doctor who told him to have his teeth X-rayed—that was a new one—so he did, and they found a couple of lovely pyorrhea pockets and one of his filled teeth had died.

Well, his sickness cost a good round sum nine-tenths of which could have been saved by a comparatively small expenditure, not to mention all his sickness and loss of business, if he had only applied method to his dental needs—dental examinations at least twice a year and prophylactic treatments at decent intervals.

A Dentist's Wife and His Health

(Author's name withheld)

The other day I spoke to my husband about a man whom we both know, a man with sagging body and a leaden countenance marked with pain and suffering.

"What do you suppose is the matter with him?" I asked.

"His tummy for one thing," answered my husband, "and if I don't miss my guess a lot of teeth that should be out."

"You used to look as bad as he does," I commented.

My husband was saved a reply by the phone. "I am Mrs. So and So," greeted a voice, "and I want to know what your husband eats."

"Why, most anything," I answered, reaching back with my foot for a chair, knowing by experience that I was in for it, so to speak, for many people have wanted to know how my husband achieved and maintains his good health. And it was evident by this woman's question that she wanted advice either for herself or someone else. So I began—

"He drinks no tea or coffee, seldom touches cocoa. His breakfasts usually consist of cornflakes mixed with bran, served with fruit and cream, a slice of coarse bread and butter topped off with a cup of hot water."

There was a deep gasp of horror. "No coffee-e-e-e," you say? "Why, John could not exist without his coffee. No bacon or eggs, and no cakes and syrup—Heavens! Well, there is no use talking, John never could live on a breakfast like that. And just a light lunch," you say, "a salad and dessert. John would starve. He wants his dinner at noon, and it has to be a good square meal with all the trimmings. And you have dinner at night," you say, "and the doctor, poor man, stops before his appetite is appeased. How can you bear to have him do it? He must be hungry all the time."

"Not at all. He says—"

"Yes, yes," impatiently, "but John can't starve."

I stopped wasting breath. Why talk to a woman who will not listen or try to understand. John most likely will have to go on suffering to the end of his days because he will not deny himself.

One of the things I anticipated most in having a home of my own was, that I would have at last the chance to exercise my culinary talents. For if I do say so, I am what is called a natural born cook, and can place a meal on a table that will make any epicure sit up and take notice.

Therefore, I began housekeeping with a well-equipped kitchen and the biggest cook book I could buy. It is to be supposed that I cooked to my heart's content. I did nothing of the kind. What I did do was to stand on a chair and pour water down my husband's throat through a nice red rubber tube. And instead of using my best pan for stew or

puddings I sterilized the pump in it. Then right in the door of my bedroom was fastened up a punching bag which friend husband walloped at a great rate, and I, dutiful wife, used to stand and count how many times he could hit it without missing. Between acts we used to walk and practice deep breathing. Sometimes we sprinted along at a great rate.

Then during the first year of my marriage I listened not to those sweet nothings I had read about, but things like these: "Got so blame nervous today I wanted to kick the side out of the office." Then a deep sigh, "Heard that old B— says I am an awful grouch." Again, "Wonder what I ate? Had such pain this morning I was about crazy."

Today my husband is a well man, eating not what he wants but what is best for him, a diet that he worked out for himself. He smokes very little, loves to be out of doors as much as possible, and gets plenty of rest and sleep. His nerves are in fine shape and he is just about correct weight, and no one would ever think of calling him a grouch now. He has had the courage to achieve and maintain good health through careful diet, rest, recreation and exercise. He can make the best coffee I ever tasted over a campfire, but no one could induce him to touch it. He can sizzle bacon to perfection but he will not even take a nibble if he feels that he should not. Not that the bacon would hurt him, but added to other things he has partaken of might mean too big a meal for him.

A couple of years ago a man lived below us in an apartment in California, who spent night after night walking the floor because he could not sleep. His small daughter led a most repressed and unhappy life because things did annoy and irritate father so. And I have seen that man sit down and eat an enormous meal, topped off with cup after cup of strong coffee. I related to him my husband's habits of abstinence and careful selection of foods, then explained how he had benefited from such a course.

Did he thank me and say he would set to work and see what he could do to make himself at least fit to live with? Nothing of the kind. He looked at me with an ironical smile upon his face, crimson from too much feasting and said: "Your husband can starve himself if he wants to, but you're not going to see this bird do it."

Starve himself! That man wouldn't starve on one-tenth of the food he eats.

I know a woman, the wife of a professional man who has always been doping herself with tablets and powders to relieve the pain in her stomach, and drinking coffee to give her pep. She drinks it between meals and at meals and before going to bed. She even drank the dye for coloring eggs one time, thinking it was coffee. A stomach pump had to be used, and I have an idea the washing out did her a lot of good. This woman is naturally brilliant, but what is she today? A

nervous, irritable woman who cannot stick to anything until it is finished. And she has reacted upon her husband until he is almost as unsettled as herself.

The other day a man said to me: "You bet, I never would have Dr. L— do anything for me. Say, that man is so nervous his hands shake."

Dr. L.—is still young, but he is burning the candle at both ends. He is a heavy smoker, he dines at irregular hours upon rich foods, partakes of midnight lunches, and does not get proper rest. Just recently I heard that he was inclined to be very irritable at times toward his patients. Children are afraid of him. At the pace he is going his practice is sure to dwindle instead of grow.

Last summer I visited for a few days in the home of a friend, the wife of a physician. It is a childless home, and my friend and her husband spend much time and thought upon themselves. Three times a day the doctor would sit down to the table and say: "My, my, but I do feel tough." Then his wife would reply: "You could not feel half as bad as I do if you tried."

This little dialogue over, she would press the button for the maid and start in to dine liberally, keeping a close second to her husband. Since that time she has been on a diet prescribed by a specialist, and he has gone to take a rest cure. Meantime he has won the reputation of being a crank.

How often we hear this: "Did you know So and So is sick?"

"No, I didn't. Why let me see, I saw him at the community supper the other night and the way he was eating, there didn't seem to be anything the matter with him."

"Well, he has been sick ever since—says he feels all in."

What is So and So's trouble? Nothing, except that he overate or feasted upon something that did not agree with him.

Often of late years I have heard my husband say: "If I eat such and such a thing, it is just like poison to me. And you can just bet, I leave it alone."

Several months ago he was "looked over" by a physician and had his teeth X-rayed. The physician told him in medical terms that he had nothing the matter with him. The X-ray showed teeth that were abscessed. These were extracted and he had a bridge put in. Today if you happen to meet him and ask him how he felt he would answer, "Fine. Couldn't feel better," or an equivalent for these words.

What the Glands Do

Gland literature is already so extensive that it is difficult to select the exact book or books needed for special information. For anyone just beginning to be interested in the subject, however, the following brief definitions by W. J. Armstrong in the Dominion Dental Journal seem to be about as clear and precise as simple, untechnical language can make them.

Glands are secreting organs.

Lymphatic glands—Assist in getting rid of an overabundance of water in the tissues. Overcome blood deficiency by transferring water from the tissues to the blood. Manufacture lymphocytes.

Spleen—Formation of white blood corpuscles. Also forms colored blood corpuscles. Breaks up red corpuscles. Acids in nitrogenous metabolism and formation of uric acid.

Thymus—Infantile blood forming organ. Controls development of generative organs.

Thyroids—Removal brings species of idiocy, defective growth, diminished coagulation of blood, headache and giddiness. Governs building of body cells. Regulates destruction of protein and its elimination.

Parathyroids—Neutralize poisonous substances formed elsewhere. Control distribution of calcium.

Suprarenals—Increases tone of voluntary muscles. Has sedative action on nerves. Acts on vaso-motor nerves. Manufactures adrenalin. Improves efficiency of heart and muscles.

Pituitary Body—Forms secretion controlling growth. Acts on arterial blood pressure. Causes contraction of involuntary muscle. Causes dilation of blood vessels in kidney. Stimulates milk secretion, sexual development. Essential for life. Affects body temperature and growth. Influences carbohydrate metabolism.

Salivary Glands—Secrete mucin and saliva. Form an enzyme—ptyalin. Beginning of digestion. Amount of water lost from the blood is equal to the quantity of saliva formed. Sublingual, submaxillary and parotid glands. Moistens mucous membrane of the mouth, assists in solution of substances, acts as lubricant on bolus of food.

Gastric Glands—Cardiac, Fundus and Pyloric Glands. Forms pepsin, trypsin and gastric juice. Prevents putrefaction in stomach. Inverts sucrose into glucose and frutose. Contains lipase. Curdles milk, to proteolytic.

Pancreas—Contains enzymes—trypsin, lipase, amylase and milk-curdling substance. Breaks down certain proteins. Converts starch into maltose. Splits fats into glycerol and fatty acids. Emulsifies fats.

Succus Enteneus—Converts disaccharides into monosaccharides.

Contains enzymes—invertase, maltase and lactase. Aids action of pancreatic juice. Acts on proteoses and peptones.

Liver—Formation of bile. General metabolism of the body. Formation of urea and uric acid. Formation of glycogen.

Stomach—Digestion. Gastric juice. Acid control of pyloris. Movement of muscular walls. Peristalsis.

Kidneys—Separates urinary constituents from the blood. Keeps blood of a constant composition. Effects of arterial pressure on secretion. Cardiac stimulation. Diuresis.

You Never Can Tell

When we're hale and full of vigor, feeling very much alive, it is hard for us to figure on the ills that may arrive. It is hard, when feeling gaudy, to imagine days in bed, with pink pains throughout the body, and a poultice on the head. So the world seems bright and sunny and the outlook simply grand, and we blow in all our money with a free and princely hand. "There is more where it was minted," we exclaim in cheerful tones: "Let it not be said or hinted that we're wedded to the bones. Let us sip the near-Canary, let us eat the costly pie; let us caper and be merry, for tomorrow we may die." All in vain our pastor twits us, we go on our reckless course, till a henry-wagon hits us, climbs us with exceeding force. To our home, by friendly neighbors, we are carried on a door; we are cut off from our labors, we may hustle never more. There are doctors, there are nurses, there are druggists on the lot, they are holding out their purses for the coin we haven't got. So we lie for weeks and suffer, eating pills and drinking fizz, thinking what a reckless duffer the undaunted spendthrift is. Oh, a cheap tin car may knock us through a board fence any day; will our past then rise to mock us with the coin we threw away?—WALT MASON.

EXTRACTIONS

No Literature can have a long continuance if not diversified with humor—*ADDISON*

Man wants but little here below,
And though he fumes and frets,
Man wants but little here below,
And that is all he gets.

(Aunt Helen)—So you took your first dancing lesson today. Did you find it hard, dear?

(Wee Nephew)—No, auntie, it's easy enough. All you have to do is to keep turnin' round and wipin' your feet.

"Goodness, Anastasia, your stockings are wrong side out."

"I know it. My legs got warm and I turned the hose on them."

A new planet has been discovered and named for Hoover. That is all right, so far, but we hope that America will not be expected to furnish food for it this coming winter.

(Native)—There are the Oldboy twins. They are ninety-eight years old.

(Stranger)—To what do they credit their long lives?

(Native)—One 'cause he used terbecker and one 'cause he never used it.

We met a woman this summer who had an original scheme for breaking in new shoes.

She says she wears them during thunderstorms and is so afraid of the lightning that she forgets all about her feet hurting.

Out of the six hundred wives of King Solomon probably fifty did nothing but tell him where he could find a clean shirt.

When Lafayette, the famous French diplomat and soldier, was here as a guest of our nation, he always caused much laughter and amusement when being introduced at public receptions. For every individual introduced to him Lafayette had but one question—"Are you a married man, sir?" If the reply was "Yes," he would say, "Lucky dog, lucky dog." If the reply to his question was "No," it would be "Happy dog, happy dog." He sure was an expert diplomat!

"Death toll of automobiles more than 12,000." This includes those who dropped dead when a woman driver gave them the right of way.

THE POOR FISH

The goldfish said:
"The world is small,
I know, because
I've seen it all."

It was at a musical. A singer had just finished "My Old Kentucky Home."

The hostess seeing one of her guests weeping in a remote corner, went to him and inquired in a sympathetic voice, "Are you a Kentuckian?"

And the answer came quickly: "No, madam, I am a musician."

"You ought to allow something off for the holes in these doughnuts," said the fresh guy to the girl in the bakery.

"All right," she replied, "wrap them up, send them back, and we'll give you the discount."

The hand that rocks the cradle
Now is stained with nicotine;
And the foot upon the rocker
Likes to step on gasoline.

A wee tot returned from Sunday school to be asked by his father what he had seen and heard. The child recalled only one feature of the sacred service, a song about "A Constipated Cross-eyed Bear." Investigation revealed the first line of the hymn as "A Consecrated Cross I'd Bear."

NOMENCLATURE

Diminutive globules of aqua pura,
Infinitesimal particles of silica
Create the potential saline fluids
And the pulchritudinous terra firma.

Microscopic actions of a philanthropic nature,
Petty utterances of an amorous character
Surfeit the terrestial planet with satisfaction
And the elysium of the higher altitudes.

SOCIETY and OTHER NOTES

Dentists and Destiny

History's turning points may be, and often are, mere pin points. From the cackling geese that saved Rome to the blistered feet of the young Columbus, which led to rest-seeking at La Rabida and acquaintance with the old abbot who interested Queen Isabella, and on down through the years great changes have hung on chance—if there be such a thing. And while we can conceive a first-class toothache as capable of hastening or hindering almost anything, not until yesterday did we know the Mexican revolution was fanned into full sweep by such a nerve-flame.

It seems President Diaz, after his flight to Paris, said: "I could have managed the situation at the time, but I had been suffering for days with toothache, so when complaints, questions for decision and demands kept coming in, I just quit."

At that time—it was only eleven years ago—teeth were known to be the frequent cause of intense discomfort, but such an incident as recently came to our notice would have been laughed at as unthinkable.

This concerns a beautiful and accomplished young woman who, shortly after marriage, began to show signs of mental trouble. Her condition soon necessitated confinement in a sanitarium, where the malady so progressed that finally her husband and mother were dissuaded from further visits.

That climax was reached some two years ago. Six months later the mother telephoned an old friend, asking if she might bring her daughter to call. Wondering what could have happened, mystified by such a request, the friend awaited their coming, and was astonished to see the younger woman quite as charming and self-possessed as of yore.

She had had all her teeth extracted. After diagnosing her case as well-nigh hopeless, a specialist of note had suggested this procedure as a last resort. Her whole system had been poisoned by bone degeneration at the roots of the teeth, and as soon as these sources of infection were revealed and treated, she recovered health and reason.

Among our readers will be found many who know of similar or kindred cases. Yet until ten years ago such relation of teeth to health, of the dentist to human destiny, had not been thought of. Today it is

a recognized practice everywhere to have the mouth X-rayed in many baffling cases of disease. Today it is known that many cases of mental disorder, rheumatism, neuritis and heart or kidney troubles are caused or intensified by just such infection.

The North American is especially interested in the remarkable progress made in this field because it was the first newspaper to seriously consider the revolutionary suggestion that diseased teeth, though apparently in good condition, might so affect the body in parts far distant from the mouth. For such pioneering we risked, and received, many a doubting smile. But our faith in the wisdom of men like Dr. Charles Mayo has been amply justified.

What the last five years have revealed in this field of dental surgery constitutes one of the most astounding of modern developments in the treatment of disease. It has given the dentist an entirely new place in the social order. Yet, as was emphasized at the recent convention of the American Dental Association in Los Angeles, the possibilities in this line have been little more than scratched, and amazing promises are held out for that time when wider and deeper digging shall have accomplished the results that must accrue to a nation as careful of its teeth as of its eyes.

The meeting mentioned was attended by some 3000 dentists, representing one-tenth of the membership of the association and one-fifteenth of the total number of dentists in this country. These figures are sufficiently important to warrant a pause for thought.

A nation of 100,000,000 people with 45,000 dentists—counting the poor ones as well as the good—means one dentist to each 2200 of the population. On the basis that 20 per cent of the people are too young or too old to need dental care, we still have an average of nearly 1600 to each dentist—more than one dentist possibly can care for. And when one considers that in this profession there is an unusual ratio of inefficiency among practitioners, the seriousness of the situation becomes apparent.

That is why the leaders of the dental and medical professions are urging more young men to study dentistry, and at the same time cooperating in an effort to have dental education raised to a higher level of medical and surgical knowledge. Says one of the former, Dr. Eugene S. Talbot, of Chicago:

> I have held for many years that the dental school could not make a professional man out of the student by the present method of teaching, even if the course should be extended to six or eight years. There are two grades of dental colleges in the United States, those that are an actual part of universities or colleges and those that are not. Those that are a part of universities have nothing to do with the matriculation of students. Those that are not have everything to do with the entrance requirements of stu-

dents. There is an unwritten law among the dental schools that all students entering must be either graduates of a high school or they must successfully pass an examination covering the average high school requirements. The result is that a large percentage of the students entering the dental schools other than those connected with universities or colleges have not an education equal to that of our common schools.

Doctor Talbot makes the surprising assertion that of the 45,000 dentists in the United States, "not over 500 buy books relating to their specialty or read them." He proceeds with the reason:

> The student begins his mechanical training almost as soon as he enters school. The result is that the ignorant young man, following the line of mechanics, on graduation enters practice as a mechanic rather than as a professional man. As I have already stated, by this method of teaching, a six-year or eight-year course would not improve the mentality or standing of the individual in the community.
>
> Again, students entering the dental school from the farm, shop and factory are unmindful of what is required of them when they enter practice. They pay their fee and expect to be qualified to serve the public successfully when they enter practice. They soon learn, however, that a broader knowledge of the essentials of medicine is necessary to cope successfully with the conditions presented by their patients than they had received in their dental training.
>
> Dentistry is a part of the healing art, and there is no reason why the dentist should not be as well educated as the physician, and hold an equal position in the community. It is high time the profession itself awoke to the situation and demanded better qualified graduates from our dental schools.

In view of the newly revealed importance of dentistry, this straight speaking on the part of one of the recognized leaders of the dental profession should interest the public, for the public is the victim of the poor dentist. Meantime, through every channel that is available, the more farsighted dentists are seeking to educate the people to the need of proper care of the teeth, and to lead folk generally to get rid of the old notion that the child's first teeth are merely temporary and need not be given special attention.

This effort includes teaching as to the importance of prenatal care. Thus, "the prospective mother should eat abundantly of foods rich in lime salts for her own health and that of the developing child, for it is during gestation that the crowns of the deciduous teeth are formed."

Undoubtedly, in the first flush of the discovery that teeth cause or intensify many diseases, the pendulum has swung too far, as always is the case under such circumstances.

"Teeth do not cause all diseases of obscure origin," says a recent radio lecture on the subject broadcasted from numerous centers, "but there is no question that they are the direct cause of much systemic trouble."

"As to the care of the teeth," continues this commonsensible preachment, "make a regular effort to keep them clean. Your teeth may decay and your gums may become diseased in spite of anything you may do, but rest assured they will last you years longer than if you made no effort—and your dental bill will be smaller.

"The kind of food eaten has a great deal to do with the teeth. The closer one lives to nature and the commoner his food, the better it is for his teeth—whole raw milk, cream, whole wheat bread, brown sugar, fruits, especially the citrus ones, the salad and the succulent vegetables. Don't be afraid of a tough piece of meat or crusts of bread, for disuse is one of the greatest enemies of good teeth and healthy gums."

From the economic and education standpoints, as well as that of health, the value of sound teeth and healthy gums is of the utmost importance. In Bridgeport, Conn., the percentage of backward children in the public schools decreased from 42 to 17 after five years of general dental supervision in the grades.

It is not hard to figure the economic value of such a change. Indeed, health is the largest of determining factors in the material welfare of any people, and now that we know teeth exert such an influence on health, it is easy to see in their proper care a road to higher efficiency in the human machine.

The dentist has been revealed as a partner of destiny, and we should rank him as an important member of the firm—and insist that he equip himself accordingly.

—*The Phila. North American.*

Report of the Organization Department to the Executive Council of the American Academy of Applied Dental Science

So that you may better acquaint yourself with the actual situation regarding the Academy, I am submitting for your thoughtful and constructive consideration, the following report.

To refresh your mind, I am reiterating the aims as adopted at our last annual meeting at Trenton:

1—To establish all practices of the healing professions on the principles of Disease Prevention.

2—To secure closer co-operation between General Medicine and Oralogy (Health Dentistry).

3—To establish the practice of Oralogy on a basis of universal application.

4—To introduce departments of Oralogy in all hospitals.

5—To promote research in the methods of preventing disease.

6—To emphasize the importance of Mouth Hygiene and Orthodontia as essential factors in general health.

7—To assist public educational institutions in providing instruction in mouth prophylaxis.

8—To standardize mechanical restorations on a prophylactic basis.

Progress

1—Academy's mouth-piece, the Journal of Oralogy, established.

2—Constitution, By-laws, and new Code of Ethics adopted.

3—Dental magazines no longer have several articles in each issue on "root canal therapy."

4—Prosthetic laboratories constructing better removable bridge work.

5—Public health lecture slides ready for the free use by all members of the Academy.

6—Members in or adjacent to large cities may now organize individual chapters.

7—Increasing co-operation with progressive health medical men.

8—Greater collection of scientific evidence to demonstrate new ideals for our annual meetings.

Problems

1—Securing names and addresses of open-minded professional men interested in the scientific problems of medical and dental co-operation for health (Oralogy).

2—Arousing the professional will to study the sciences of bacteriology and biology.

3—Selection of department chairman—Department of Research.

4—Placing the "valuable health story" or Disease Prevention possibilities of Oralogy before the minds of humanity.

5—Educating dental manufacturers that Oralogy means more mouth attentions than ever.

At your next annual meeting at Miami, Florida, January 8-9-10-11, 1923, further scientific evidence will be presented in the way of pathological and bacteriological specimens, case histories and results that all tend to prove the value of your ideal. How many will you interest and bring to this valuable health demonstration?

Bertram Ball,
Director, Dept. of Organization.

Trees on the Teeth

Went by a vacant lot yesterday and saw a lot of birch scrub growing on it. Some of the treelets were six feet high. Up to two years ago I would occasionally help to clean up that lot that the kids might play on it, says Dr. W. A. Evans in the Boston Herald. No birch treelets there then. No birch trees nearby. How? The wind blew fertilized birch pollen over there; some of it stuck and grew.

When one looks around the necks of the teeth he will find a little collar of gray slime. Probably he can scrape it off easily. Maybe the slime is a hard substance, greenish brown in color. If so it is probably stuck pretty tight, so tight that it seems a part of the tooth. If the creamy, pulpy material, or the greenish brown material be examined under the microscope, it is seen to be composed of trees. Not birch trees, it is true, but trees of a kind nevertheless.

Some of these tooth plants, if you please to call them such, root into the crevices and cause decay. Farmers have seen tree roots split open the walls of wells; undertakers have seen them open up vaults; builders have seen them crack builing walls. The tooth plants do not cause decay in exactly the way the tree roots crack building walls, but the highest grade scientist will tell you that the procedure is not as different as you had thought.

Others of them cause pyorrhea and still others absorb and cause rheumatism, neuritis, and other disturbances. That being the case, keeping the teeth clean becomes a matter of no small importance. The teeth are essentially exposed bones. In no other part of the body are bones exposed. They are irregular in surface and they "cut through" the gums. This being the case, keeping them clean is not an easy matter.

If birch pollen can manage to catch on in a weed lot, the trees on the teeth, called tartar, can likewise get a foothold. I wish somehow we could lose the term "brushing the teeth" and substitute "cleaning the teeth." A better injunction would be to clean each tooth.

The orthodox brushing, plus eating and chewing, will clean parts of the teeth, but not the necks, nor certain surfaces located near places where saliva pours out. To clean those places should be the task.

One friend of mine cleans all such areas with one brush; then polishes other surfaces with ordinary paste and an ordinary brush and ends up by wiping each tooth with a soft cloth. Another cleans each tooth with paper pulp and goes around the necks with an orange stick.

Oral Surgery, a Department of Gastroenterology*

Medical Viewpoint

By G. Reese Satterlee, M.D., New York

Modern dentistry, at least up to the last two or three years, if we are to believe the writings and constructive criticisms of leading men in the dental profession, such as Thoma of Harvard, has been responsible for a great deal more systemic medical pathology than any of us would until now have believed possible.

Just a year ago the New York City Board of Health published a bulletin which called attention to the fact that one quarter of the yearly deaths in the United States, might have been postponed from five to ten years by proper care of the teeth. The matter, therefore, is one of great interest to both professions. The ingenious methods devised by dentists which are directed mainly to the preservation of dead or badly damaged teeth, are largely responsible for this state of affairs. The result of their employment has been not only the sealing up of an extremely lethal bacterial infection in the teeth themselves, but also a crowding infection back into the jaw bone and frequently into the maxillary sinus itself. Unfortunately these conditions are not characterized by the usual sensory disturbance. They remain hidden and sealed up for years. Although relatively harmless in themselves, at least so far as the local conditions go, they are generally recognized today as being the frequent, if not the chief source, of damaging toxemias which cause many of the well recognized lesions of the great systems of the body.

Occasionally, however, due probably to the accidental introduction of a true pyogenic organism, these infected areas may come to the surface and give rise to the classical signs of abscess. For the bacteria which cause the true focal or cryptic bone lesion of the mouth are non-pyogenic, being usually streptococci. These streptococci, while they may do considerable local damage, do it in no sense to the degree that the pus producing organisms are capable of. The streptococci, by their own autolysis and by the circulation of their toxins, cause remote damage far outweighing that resulting from any alveolar abscess and infinitely more dangerous.

Thus, it is not abscess formation but bone necrosis which should be primarily considered. A bone abscess is easily distinguished by the X-ray, while much of the bone necrosis of the type under consideration gives little evidence under the ray. Thus there are two important

*Presented at the annual meeting of the American Academy of Applied Dental Science, Trenton, N. J., January 11, 1922.

points of difference between the ordinary alveolar abscess due to pyogenic infection, and bone necrosis due to streptococcic infection. It is therefore evident, as will be shown in the case histories, that extraction of teeth alone is not sufficient without thorough removal of all the necrotic areas. This accounts for the fact so often noticed that no systemic improvement has followed the simple removal of teeth.

The modern viewpoint is to consider such gross pathological conditions as chronic appendicitis, gall-bladder disease, ulceration of the stomach and bowels, infected colons, many kidney infections, and most cardiac disorders as secondary to focal infections. The writer[1] stated five years ago, that the so-called neurasthenic depressions and a great variety of toxic mental states, were all to be looked upon as senile pathology or at least as terminal conditions from long standing focal infection. Many of these conditions of course require major operative intervention—this comprised the surgery of the past decade. Draper[2] has shown that the surgery of the future will be largely preventive.

It is unnecessary to recount the difficulties and failures which often attend this major surgical work. In 1916 I summarized[3] a series of one hundred and thirty-six patients presenting the classical evidence of chronic intestinal invalidism, and found that in no less than thirty-three, or twenty-five per cent, the appendix had been removed either without benefit, or in some cases with actual detriment. Since that time I believe that the ratio has remained the same. This finding is not peculiar as it is the common experience of all gastroenterologists that their patients too often are not better or even are worse after operation. I do not mean to imply that major surgery is not indicated in many cases or that it is not done right, but simply to recite my own experience and to make suggestions based upon it. It has convinced me that the trouble is not with the surgery so much as with the time at which it is done. In most cases of chronic intestinal invalidism we believe that the appendix was at one time seriously involved, and perhaps was even the primary seat of the infection, but that through failure to remove it in childhood, or at the onset of the symptoms, the infection had already damaged the cecum, the right colon, and other organs irreparably. Rosenow has apparently demonstrated experimentally, that infection of the appendix may occur from focal infection elsewhere in the body, and clinical evidence gives more and more support to this theory.

As the experimental work in pathology of the alimentary canal progresses it becomes more certain that infection travels, in some unknown way, from mouth to anus. Obviously, therefore, the entire canal must from now on be treated as a single unit. I have been struck by the frequency with which notable improvement, if not entire arrest of symptoms, has occurred among well defined chronic intestinal invalids after the removal of local foci in the mouth. Could there be stronger

evidence of the importance of such removal? It is very significant of the attitude of the profession that 51 per cent of this year's Freshman class at Harvard have had tonsillectomy.

More than five years ago the writer presented evidence, based on a large number of cases, that toxemia arising from the alimentary canal was the direct cause of many mental and neurological conditions, then still supposed to be separate clinical entities, but since that time demonstrated, both experimentally and clinically, to be simply symptomatic of focal infections. Final proof of their importance is now at hand in the splendid results obtained by Cotton[4] in his treatment of patients suffering from actual insanity.

From Cotton's extensive and thoroughly scientific studies[4] he concludes not only that these are usually nothing more than terminal manifestations of prolonged toxemia from focal infection, but, what is of at least equal importance, that the mild nervous and mental disturbances, so commonly seen by every practitioner, are often the prodromal symptoms of chronic insanity. I am aware that this viewpoint is at variance with that held by the classical school of psychiatry, but continued observation of chronic gastrointestinal toxemics, all of whom show marked nervous and mental disturbances, has long since convinced me of the close relationship between the terminal mental stages, as described by Cotton, and the prodromal stages observed by myself and other gastroenterologists. Moreover, there is in many cases a mutation or gradual merger from one to the other.

If this is so, what can be done for prevention? It is my own belief that the present confusion among gastroenterologists as to diagnosis and treatment has arisen largely from lack of recognition of the essential unity of the alimentary canal, coupled with a failure to recognize the importance of the removal of local foci of infection in the course of the canal. This interests you as dentists because you deal with one of the principal sites of focal infection in the body.

Before closing I should like to mention an incident that occurred in one of the leading general hospitals of this city.

On reviewing the yearly drug report, it was noted that the average monthly dosage of aspirin, which had been 2,000 grains, suddenly rose during three months only, to 9,000 grains per month. It was found that during these three months, owing to rotation of service, the practice of removing dental infection had been discontinued, the attending physician not being as yet convinced of its value. Surgical therapy for the removal of the cause had given place to drug therapy, affording an interesting and accurate basis for future study of the comparative value of the two methods.

While the recognition of the value of the removal of focal infection is now broadly held, the actual practice of thorough extirpation of these

foci is unfortunately not usually carried out. This is not the fault of the individual physician, but of the inadequate system under which he works.

It will never be accomplished until full cooperation of the specialties is assured, preferably through the medium of group medicine.

M. W., female, aet. sixty-four. Usual symptoms of chronic intestinal invalidism past five years. Chief complaint, progressive blindness.

All the teeth were extracted thirty years ago. Not seriously ill until three years ago, when she developed pain in stomach, nausea, and occasional vomiting. Pain persistent after eating, always worse at night. Shortly after gastrointestinal trouble developed, low-grade inflammation of the uveal tract of both eyes appeared with marked increase in the intraocular tension and secondary glaucoma. Tuberculosis of the eye excluded by all known tests at Saranac Lake. Patient placed under care of competent eye specialist in Montreal for two years. Wassermann negative. Urine, faint trace albumin—few casts. Dentists reported no stumps of teeth or roots in the mouth. Vision rapidly failing.

February 21, 1921, left eye gave out, vomited all that day.

Ophthalmic examination: Right, vision 20/200; left, vision absent. Right eye coloboma from iridectomy. Diagnosis iridocyclitis with secondary glaucoma. Belladonna 1 per cent., dionin 10 per cent.

Physical: Chest normal, tenderness and rigidity in right upper quadrant marked. Fractional gastric test: free hydrochloric absent. All tests showed *Staphylococcus albus*. Renal efficiency, 48 per cent at end of second hour. Nasal examination: deflected septum, small ulcer. Small infected tonsils. Neurological: normal. X-ray: third degree colon delay, residual appendix, irregular loop of colon at hepatic flexure, disturbance of motility in cecum. Intestinal tuberculosis had been ruled out at Saranac.

Abdominal Diagnosis: probable disease right side of abdomen. Dental examination: gums flabby throughout; the X-ray shows area of necrosis both sides, both antra infected. Operation: necrotic areas curetted, both antra opened.

Progress.—In three weeks the vision in the right eye had improved so that patient could read the fourth line on the optic chart. Intraocular tension subsiding. Abdominal distress and all gastrointestinal manifestations much improved. January reports from this patient show that she has recovered sufficiently to do her own work, is able to read ordinary print, and has gained 30 pounds. Vision left eye, permanently destroyed.

This case demonstrates the close relationship between eye conditions and oral infection. It also points to the essential unity of the alimentary canal from a clinical viewpoint.

L. G. E., female, aet. sixty-four. Under observation since 1916. Persistent dyspepsia, arthritis involving all joints of both hands and wrists. Late in 1915 she could not close her hands, obliged to eat with a spoon. Walked with difficulty; slept little; could not lie on right side because of severe abdominal pain. Constipation increasing, duration fifteen years; purgatives. Condition that of helpless invalidism.

Objective Findings: Stout, hypothyroid, skin dry, hair brittle. Finger flexion reduced to forty degrees. Joint condition subacute, right knee involved and apparent bursitis of right hip. Heart and lungs negative. Abdomen distended with gas, pain and rigidity in upper right quadrant. Right tonsil one plus. Teeth pronounced negative by a dentist of high standing. Pelvis and rectum negative.

Fifty per cent gastric X-ray delay at six and one-quarter hours; great irregularity of lesser curvature; large residue twenty-four hours postenema. Blood pressure normal. Polymorphonuclear and small lymphocytes equal. Wassermann negative, both spinal and blood. Urine negative.

Diagnosis: Cholecystitis probable cause for arthritis. Patient given thyroid and pituitary to point of tolerance. Marked improvement in symptoms.

Two years later, mass in right axilla, always enlarged following tonsillitis. Removal of axillary glands and tonsils; identical streptococcus found in each; autogenous vaccine. Marked improvement, patient able to reduce thyroid treatment, which had been constantly necessary.

At close of 1920 developed pain and tenderness in neck and in right upper abdominal quadrant. Polymorphonuclears fifty, small lymphocytes forty-eight. Gastrointestinal X-ray negative. Five diseased teeth removed, thorough curettage of right antrum. Patient able to discontinue all previous treatment, condition better than in twenty years.

This case reflects the gradual development of modern medicine; suggests that the endrocrine system is inhibited by toxins from local colon and streptococcus foci; shows unusual direct lymphatic relationship between the tonsil and the axilla; discloses the effects of chronic bacterial toxemia upon the ratio of polymorphonuclear cells to small lymphocytes, and finally demonstrates the importance of recognition and removal of all local foci of infection.

9 East Fortieth Street.

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—(*Reprint by courtesy of Medical Record*)

In Old Virginey

The Annual Outing of the Richmond City Dental Society was a remarkably pleasant and successful affair this year. The Society consists of thirty or more members, all ethical and all in good standing. The President is Dr. D. Smith, and the Secretary Dr. J. A. Romer.

The picture shows some of the members who were present on this festive occasion, and it goes without saying that they look as if there was nothing the matter with the day's activities.

Can This Change Be Made?

Consultation committees when major operations are contemplated, and the writing of prescriptions so that they may be generally understood, are two radical departures from the present practice recommended by the International Alliance of Physicians and Surgeons and National Association of Progressive Medicine at the twentieth annual convention recently held at Atlantic City.

"All prescriptions shall be written in the language spoken in the country in which the doctor is licensed to practice and in which the patient is being treated at the time the prescription is given.

"All major operations shall be decided upon by a committee of three physicians, two chosen by the patient and one by the Board of Health of the city or county in which the operation is to be performed."

The Teaching of Tooth Morphology

By Josephine E. Luhan, D.D.S., Columbia University

The course of instruction pursued in tooth morphology in the school of Oral Hygiene, Columbia University, is somewhat different from other similar courses taught in dental institutions.

The first step is to lecture to the entire class on the anatomy of the tooth they are about to start carving. Similar lectures are given previous to the carving of each succeeding tooth until the students have carved duplicates of the teeth of a lateral half of the upper and lower jaws. In these lectures the anatomy of the tooth is described and the exact method of procedure is given step by step as to the carving of surfaces, grooves and sulci, and the manipulation of instruments used for each. The students are then arranged in groups in such a manner that each student has easy access to the instructor.

They are supplied with charts of the teeth, plaster models and with extracted natural teeth which serve as guides in the carving. The student is then shown how to divide the block into three parts, the crown, the root and the base. The next step is to have them make a groove in the central axis of the block and work from this developing the grooves, lobes and sulci in the pre-molars and molars, and the labial and lingual grooves and basilar pits in the incisors and cuspids.

The substance used in the making of the blocks from which the models are carved is different from any other used in schools, being a composition made from our own formula. It consists of stearic acid, paraffin and coloring matter. This makes a grayish opaque substance of a good consistency for carving and also takes a very satisfactory polish. Other schools use for carving material, modeling compound, plaster Paris, vegetable ivory and crayon, but these all have many disadvantages which are known to all who are familiar with the work, so I shall not enumerate them. The wax is moulded into oblong blocks one-half inch to a side and one and a half inches in length. These are used for carving the two sets. The first set is carved twice the natural size while the second and final set is made to correspond with the natural size, being the one upon which the final examination is given.

The time devoted to the entire course is seventy-two hours, covering a period of four weeks of eighteen hours each week. This being a limited time to cover the work thoroughly, I am unable to have the students carve the teeth according to measurement but they do it by approximation.

The books for reference are "Dewy's Dental Anatomy," "McGehee's Operative and Dental Anatomy Technics," and "Black's Dental Anatomy."

Circumstantial Evidence

By E. S. H., East St. Louis, Ill.

Once upon a time a prospective juror was asked whether he had any reasons for not convicting on circumstantial evidence. Replying in the affirmative, he explained his reasons with a story which brought out the point clearly. There are several such stories in circulation and all are good, convincing arguments against such a verdict; but here is one on the dentist, and furthermore it actually happened.

Dr. So-and-So conducts an office on a busy corner in a thriving Illinois town, and the corner directly across the street is often crowded with people waiting to board the cars. Necessarily this brings a great many people face to face with the broad windows of the dentist's office on the second floor, upon which appears in neat gold lettering the name of the occupant and the profession he follows.

Not a bad situation at all, one may think, but wait till we expose the fly in the ointment.

One day the dentist was very busy, and perhaps very happy in the thought that so many people were brought unwittingly within range of his ethical advertising.

About this time the assistant called the Doctor's attention to the fact that the crowd opposite was gazing intensely up at his windows; some with expressions of mirth, some registering unmistakable horror, and one sympathetic little lady with open mouth was holding her jaw as if in recollection of an unpleasant experience.

Just then a heart-rending, quavering cry broke the stillness of the pleasant afternoon. The sound seemed to come from nowhere but it filled the air. A high, shrill feminine shriek, then another and another.

It sounded exactly like that patient you recall that tried to say "Ah!" while you swung on that fractious upper third molar.

Small wonder those in the crowd shuddered, and uppermost in their minds as they boarded the cars for home was the picture of Dr. So-and-So committing near murder.

We forgot to mention that directly above the dentist's office was a vocal studio wherein the innocent cause of all the mental anguish was doing her best to perform vocal gymnastics in the vicinity of high "C."

Dental Infection from a Medical Point of View

Charles H. Sprague, M.D., in a recent number of *Northwest Medicine* states very emphatically in his article that dental infection is too often ignored in routine examinations. He says:

"The spongy, red gums, a few drops of pus, a discolored, insen-

sitive tooth (even the golden test tube full of excellent culture media, anchored over a foreign body sticking into the jawbone) mean nothing, it seems, to some. This same drop of pus, if discovered exuding from an ear, a sinus, a fallopian tube, and quite commonly in some hands, even from the appendix, is hailed as a diagnostic triumph and radically dealt with instanter. The annual crop of several million tonsils will slowly but surely diminish, as we learn more of their function, together with the other lymphatic tissues of the throat and neck and, removed at its source, this constant stream of infective material with which they are bathed and have to battle continually."

Important Notice

(T. D. 3373)

NARCOTICS—REPORTING STOLEN OR LOST ORDER FORMS

Effective immediately. Article 111½ is hereby added to Regulations 35, Revised November, 1919, as follows:

Article 111½. *Stolen and Lost Order Forms.* Whenever any used or unused order forms are stolen from, or lost (otherwise than in the course of transmission) by, any person registered under the Act, he shall immediately upon discovery of such theft or loss, report the same to the Commissioner of Internal Revenue, Washington, D. C., stating the serial number of each duplicate and original form stolen or lost. If the theft or loss includes any original orders received from other persons, and the registrant is unable to state the serial numbers of such orders, the date of receipt thereof and the names and addresses of the purchasers thereunder should be stated. If the theft or loss is of or includes any entire books and the registrant is unable to state the serial numbers of the duplicate and original forms contained therein, the theft or loss shall in like manner be reported to the Collector of Internal Revenue from whom such books were purchased, instead of to the Commissioner of Internal Revenue, with a statement in lieu of the numbers of the forms contained in such books, of the date or approximate date of purchase thereof; and the Collector immediately upon receipt of such report shall transmit the same to this office together with advice from his records (Form 679) of the serial numbers of the forms contained in such books.

D. H. Blair,
Commissioner of Internal Revenue.

Approved: July 19, 1922.
A. W. Mellon,
Secretary of the Treasury.

A World's Record

Bring on your corn on the cob! We have Baby Louis Flores of Coney Island with us today, in charge of his mother, who is very proud of her baby boy who was born with twelve honest-to-goodness teeth, according to a report in the *New York Tribune*. Local medicos say that this is a world's record in the way of juvenile dental accomplishments.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS, OF AUGUST 24, 1912

Of The Dental Digest
at New York, N. Y.
State of New York } ss.
County of New York }

Published monthly
for October 1, 1922

Before me, a Notary Public in and for the State and county aforesaid, personally appeared John R. Sheppard, who, having been duly sworn according to law, deposes and says that he is the Secretary of the Dentists' Supply Co., Publishers of The Dental Digest, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

NAME OF	POST OFFICE ADDRESS
Publisher, The Dentists' Supply Company	220 West 42nd St., New York, N. Y.
Editor, George Wood Clapp	New Rochelle, N. Y.
Managing Editor, George Wood Clapp	New Rochelle, N. Y.
Business Manager, Jay Voorhies	Babylon, N. Y.

2. That the owners are:

The Dentists' Supply Company	220 West 42nd St., New York, N. Y.
DeTrey & Co., Ltd.	23 Swallow St., London, England
Leroy Frantz	Sutton Manor, New Rochelle, N. Y.
Gertrude L. Frantz, Trustee for Horace G. Frantz	221 Cheyenne Rd., Colorado Springs, Colo.
Gertrude L. Frantz	221 Cheyenne Rd., Colorado Springs, Colo.
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Ida O. Whiteley	905 S. Beaver St., York, Pa.
George H. Whiteley, Jr.	121 W. Springettsbury Ave., York, Pa.
James Osborne Whiteley	122 W. Springettsbury Ave., York, Pa.

De Trey & Co., Ltd., is a corporation organized under the laws of England, with an authorized capital stock of 2,000,000 shares of One Pound each, ownership of which is scattered over a considerable part of Europe and includes a long list of names unknown to us, and probably a number of banks and other corporations.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

THE DENTISTS' SUPPLY COMPANY,
J. R. Sheppard, *Sec'y & Treas.*

Sworn to and subscribed before me this 10th day of October, 1922.

[Seal] Emlie E. Schaad
Notary Public, Westchester County
Certificate filed in N. Y. County
Clerk's No. 1073; Register's No. 3776A—My commission expires March 30, 1923.

FUTURE EVENTS

THE DEPARTMENT OF REGISTRATION AND EDUCATION OF THE STATE OF ILLINOIS will hold its next dental examination at Chicago, Nov. 13 to 16, 1922. The written work will be held in Room 1006 City Hall, and 1007 County Building, Nov. 13 and 14, 8:30 A. M. The practical work will be held at the University of Illinois Dental College, Nov. 15 and 16, at 8:30 A. M.

V. C. MICHELS, *Supt. of Registration.*

The next regular examination of the PENNSYLVANIA BOARD OF DENTAL EXAMINERS will be held at the University of Pittsburgh, Pittsburgh, and the Temple University, 18th and Buttonwood Streets, Philadelphia, on Wednesday, Thursday, Friday and Saturday, December 6, 7, 8, and 9, 1922.

The theoretical examinations will begin on Wednesday, December 6, at nine A. M. The examinations in practical work will be held on Saturday, December 9, starting with the operative work at 8:30 A. M. Application papers may be secured from the Department of Public Instruction, Harrisburg.

The examinations for hygienists will be held at the same time and places.

For further information address the secretary, Alexander H. Reynolds, 4630 Chester Avenue, Philadelphia.

THE IOWA STATE BOARD OF DENTAL EXAMINERS will meet for the purpose of examining candidates for a license to practise in Iowa, at Iowa City College of Dentistry, beginning Monday, December 11, 1922, at 9:00 A. M. An examination for Dental Hygienists will be given. For further information and application blanks address

DR. C. B. MILLER, *Secretary,*
726 Fleming Bldg., Des Moines, Iowa.

The Annual Meeting of the DENTAL PROTECTIVE ASSOCIATION OF THE UNITED STATES will be held at the Palmer House, State and Monroe Streets, Chicago, on the third Monday of December, the 18th, at 4 P. M. sharp. The report of the officers will be given; a Board of Directors will be elected and such other business transacted as should come before the Association. All members are urgently requested to be present. By order of the Board of Directors,

J. G. REID, *President,*
D. M. GALLIE, *Vice-President and Treasurer,*
E. W. ELLIOT, *Secretary.*

THE WISCONSIN STATE BOARD OF DENTAL EXAMINERS will hold examinations for license on December 18 to 22, 1922, in Milwaukee. Both dentists and dental hygienists will be examined. Applications must be filed at least ten days before examinations. For information and blanks write to

J. L. BLISH, D.D.S., *Secretary,*
Fond du Lac, Wis.

The next meeting of the OKLAHOMA STATE BOARD OF DENTAL EXAMINERS will be held in the State Capitol Bldg., at Oklahoma City, Oklahoma, December 18, 1922.

THE COLORADO STATE BOARD OF DENTAL EXAMINERS holds its examinations in the State House, Denver, Colorado, the first Tuesdays of June and December, 1922, continuing five days. For further information and application blanks apply to

WM. H. FLINT, D.D.S., *Secretary,*
Littleton, Colorado.

The Thirtieth Annual Meeting of the AMERICAN INSTITUTE OF DENTAL TEACHERS will be held at Creighton University, Omaha, Nebraska, Hotel Fontenelle headquarters, January 22, 23, 24 and 25, 1923. A cordial invitation is extended to all persons interested in dental teaching.

A. H. HIPPLE, *President,*
ABRAM HOFFMAN, *Secretary,*
381 Linwood Ave., Buffalo, N. Y.

The Fifty-ninth Annual Meeting of the CONNECTICUT STATE DENTAL ASSOCIATION will be held at Hartford, April 19, 20, 21, 1923.

S. E. ARMSTRONG, *Secretary,*
792 Chapel St., New Haven, Conn.

The fifty-sixth annual meeting of the TENNESSEE STATE DENTAL ASSOCIATION will be held in Nashville, Tenn., May 2, 3, 4 and 5, 1923, with headquarters at the Hermitage Hotel. A clinical and scientific program of unusual interest is being arranged.

O. A. OLIVER, *President,*
JOE MINOR, *Secretary,*
Lambuth Building, Nashville, Tenn.
J. W. WINN, *Chairman, Program Committee,*
Lambuth Building, Nashville, Tenn.

The fifty-fifth annual meeting of THE DENTAL SOCIETY OF THE STATE OF NEW YORK will be held at the Hotel Commodore, New York City, May 9, 10, 11 and 12, 1923. A cordial invitation is extended to all ethical practitioners, residents of New York and sister states. Admission to all literary meetings and clinics will be secured by presentation of cards disclosing membership in State and National Association Societies. All literary exercises, clinics, and exhibits will be staged in the Hotel Commodore.

The Executive Council for the transaction of business will convene Tuesday, May 8th, at 3 P. M.

The exhibits will be in charge of Clinic Committee, Dr. H. C. Bennett, Chairman, 376 Fifth Ave., New York City. Exhibitors please address Dr. Bennett for further information. Exhibitors desiring space should secure same without delay.

Every effort is being put forth to make the 55th meeting in all respects the most attractive and memorable in the history of the Society.

Hotel reservations should be made direct with the Hotel Management.

For further information and programs address the Secretary.

A. P. BURKHART, *Secretary,*
89 Genesee St., Auburn, N. Y.